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# ECONOMIC PROFILE
for
BUREAU OF LAND MANAGEMENT
in
OREGON

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ECONOMIC PROFILE OF BLM MANAGED LANDS IN OREGON

Preface

The Bureau of Land Management Districts in Oregon are preparing Management Framework Plans to permit informed and objective multiple use decisions for management of resources to best serve public needs and to be responsive to Congressional, Departmental, and Bureau objectives. The Bureau of Land Management's objective is to plan for and manage or dispose of public lands (and resources) in a manner to provide the maximum benefit for the general public.

Economic impact of resource management alternatives must be considered in making resource management decisions. This economic profile brings together resource supply and demand information for analyzing the needs and opportunities for using BLM lands and resources in such a manner as to promote Bureau objectives. In order to weigh economic benefits of one resource against another, an effort is made to evaluate the market value of all resources with which we are concerned including outdoor recreation, hunting, and fishing. This is done with the realization that no method has been devised for placing a dollar value on a day of fishing or camping on a comparable basis with the value of a thousand board feet of timber. Lack of basic data and the time to develop such data forces the use of the rather crude method of evaluation of recreation, hunting, and fishing on the basis of "new" money brought into an area by non-local users or on the value of other benefits foregone.

In this study personal income is used as the measure of economic activity since gross product data is not readily available on a county or area basis. Personal income reflects consumer purchasing power which in turn is an indicator of demand for natural resources. Personal income also reflects consumer well-being and is an indicator of the need for the input of additional resources into the economy and is a means of quantifying impact of alternative resource management programs.

Where personal income data for industry sectors such as recreation is not available, business income multipliers are used to estimate the economic impact of expenditures.

SUMMARY

Oregon's population growth the past decade was 2% higher than in the 1950-1960 period, being nearly 2% per year. Most of the eastern Oregon counties lost population while the Willamette Valley experienced rapid growth. Rural population growth throughout the state either stagnated or declined while urban areas mushroomed. Unemployment averaged 6.7% in western Oregon in 1970, being as high as 9.7% in Yamhill County. It averaged 7.1% in eastern Oregon, reaching 8.6% in Crook County. Seventeen counties were classified as having substantial or persistent unemployment in 1971. Nearly half the 1970 benefit payments to unemployment insurance claimants in Douglas County were to lumber and wood product workers.

This study finds that few sawmills in Oregon are being operated at maximum efficiency. Mills in western Oregon are being operated at a range of only 12.6% to 48% of their capacity while those in eastern Oregon make use of 19.6% to 65.3% of their capacity. There is at least double the milling capacity over and above current lumber production or stumpage availability. Looking into the future it is expected that many of the smaller, inefficient sawmills will continue to close down due to the squeeze between the short supply of stumpage, competition from log export demands, and the lid on wood product prices due to the competition from substitute building material. However the increasing value of wood chips and sawdust has materially increased the monetary conversion value of logs for those mills that can salvage this material. It does not appear that even a major increase in BLM stumpage availability would keep all the small, less efficient sawmills in operation. A major portion of the BLM timber sold in 1968 was purchased by the big, more efficient mills.

Of all the BLM managed resources in Oregon, only timber has a significant impact on the state's economy. No town or mill in eastern Oregon was found dependent on supplies of BLM stumpage. Many towns and mills in western Oregon are found to be so dependent. Local economies in western Oregon will become more and more dependent on availability of stumpage from the public forest lands as the timber on private lands is depleted.

In 1968 BLM stumpage from western Oregon districts provided direct employment to 8,497 workers with a payroll of around $88,551,000. Timber sales by eastern Oregon BLM districts provided direct employment to 184 people with a payroll of about $1,238,000.

This study agrees with the Sloan report[69/] finding that a 150 million board feet reduction in BLM's annual allowable timber harvest will have no more than a 0.4% impact on the economy of the state. It could have serious economic impact on identified communities such as Monroe, Noti, Drain, Elkton, Myrtle Point, Cave Junction, Grant's Pass, Merlin, and Ashland if supplies of BLM stumpage were reduced in these areas.

BLM's intensified forest management program will provide new jobs in the area being treated. However the limited amount of employment generated will have a relatively small impact on the local economies.

Livestock is the major agricultural crop sold in the state. It is the one crop that is not receiving a Federal subsidy nor has there been an over production problem.* The livestock industry shows major dependency on BLM forage only in Lake, Malheur, and Harney Counties. Except for Jackson and Josephine Counties, the forage resource on BLM lands in western Oregon is insignificant.

Beef demand on a national basis is expected to increase by 32% between 1970 and 1980. It may be that the forage resources on BLM managed lands will have to be increased to help meet this demand. However this study shows that a 20% increase in BLM forage production will have little effect on the economy in the range areas.

A 39% increase in demand for fishing opportunities on BLM land is anticipated by 1980 as well as a 24% increase in hunting demand and non-consumptive wildlife use. Value of the recreation resource on BLM lands appears to be increasing at a much faster rate than any other resource. On the basis of timber trade-offs, value of BLM's recreation resource in western Oregon is $49,653,980.

*This statement needs to be qualified to point out that ranchers having BLM grazing leases or permits do receive an indirect subsidy to the extent that grazing rentals paid to the government are below market value.

SUMMARY

Economic Value of BLM 1970 Wood Fiber Production in Oregon

Present Situation:

Initial Users: There are 523 wood processing plants in Oregon, most of which are affected to some degree by BLM timber sales. In 1968 these plants had 81,114 employees with a payroll of $623, 450,310. In 1970 wood products employment had dropped to 66,766 with a payroll of $572,193,469. In 1970 BLM timber sold was 18.6% of the total used, being 23.6% of that used in western Oregon and 12.9% of that used in eastern Oregon. Stumpage value of BLM timber sold in 1970 was $62,325,834.

Timber Industry: Based on present values of lumber, plywood, wood pulp, and wood chips, initial processing of a log creates a value about 3.2 times cost of stumpage. On this basis initial processing of BLM's 1970 timber sales resulted in products worth nearly $200,000,000. Value of just the wood waste derived from processing BLM stumpage totalled about $22,000,000.

Local Economy: In 1970 BLM stumpage provided 12,950 jobs in the wood products industry with a payroll of $110,940,794. Respending of this money in the area provided additional jobs and payrolls for a total economic benefit to the community of $157,023,814 from the BLM timber sold.

Benchmark Projections: Forest Service projections show wood products consumption in the United States in 1980 at a leval 38.5% above 1970 production.[24/] It does not appear that the sustained yield objective for BLM timber harvest could be maintained under a 38.5% increase in cut. However a 25% increase in BLM's allowable cut would provide direct wages of $138,675,990 and have a community impact of $196,073,980.

SUMMARY

Economic Value of BLM Livestock Forage in 1970

Present Situation:

Initial Users: In 1970 there were 1,713 ranchers dependent to some degree on BLM forage. Permitted use included 266,575 head of cattle and 56,723 head of sheep. This equals 16.6% of all the horses and cattle in the state and 10.7% of the sheep. Average net benefit per rancher from use of BLM forage was $2,112 in 1970. Net rancher benefits in Oregon totaled $2,515,180. The livestock industry in eastern Oregon is found to be 6.9% dependent on BLM forage.

Livestock Industry: A total of 985,931 a.u.m.s of forage was provided from BLM lands in Oregon in 1970 worth $2,957,379 to the ranchers. Income from livestock sales was $131,920,000, being an average return per animal unit of breeding head of $80. In 5 counties the livestock industry is at least 5% dependent on BLM forage.

Local Communities: Livestock employment wages creditable to utilization of BLM forage totalled about $2,800,000. Respending of this money locally resulted in a community income benefit of over $5 million. Only the economies of Malheur, Harney, and Lake Counties show substantial dependency on continued availability of BLM forage.

1980 Benchwork Projections: Projections indicate a need for a 32% increase in beef cattle marketings by 1980 to meet national demands. An 85% increase in demand is anticipated by year 2000. In the event BLM is able to provide its share of the increased forage demand needed to meet the 1980 needs, value of the increased forage to the ranchers would be $4 million. Respending of this amount of money by ranchers would increase local economic activity to about $6,800,000.

SUMMARY

Economic Value of BLM's Hunting and Fishing Resources in Oregon

Present Situation:

Initial Users: District estimates show a total of 1,100,000 recreation days fishing and 957,000 hunting recreation days use on BLM lands in Oregon. It is estimated that there were an additional 700,000 recreation days of non-consumptive wildlife use. Based on Senate Document 97 guides, user values for hunters using BLM lands came to $5,359,200 and user values from non-consumptive wildlife enjoyment totalled $1,400,000 for a total wildlife benefit of $6,759,200. Fishermen user value on these lands came to $2,750,000

Local Economy: In this study the hunting and fishing user values are deemed to reflect the expenditures made to enjoy these resources. The respending of this money in the area resulted in a total economic benefit from use of BLM's wildlife resource of $12,702,068 from both consumptive and non-consumptive use. Economic benefits from fishermen use on BLM lands came to $5,170,000.

Future Demand: A 39% increase in fishing demand is expected by 1980 over 1970 use with an 84% increase by year 2000. This indicates there will be a total of 1,529,000 recreation days of fishing on BLM lands by 1980 and 2,024,000 by year 2000. This should result in a direct economic benefit to local communities of $3,822,500 which in turn should have a beneficial impact on the economy of $7,186,300.

A 24% increase in consumptive and non-consumptive wildlife use is projected by 1980 with a 65% increase by year 2000. This equals 1,186,680 hunting days on BLM lands by 1980 and 868,000 days non-consumptive wildlife use for a total of 2,074,680 recreation days. Hunter days expenditure should equal $6,645,400 and non-consumptive users $1,736,000 with a total impact on the economy of $15,757,700.

SUMMARY

Economic Value of BLM's Recreational Resource in Oregon
(excluding hunting and fishing)

Present Situation:

Initial Users: BLM recreation use data show a total of 2,101,000 recreation days enjoyment of BLM resources in FY 1971.[52] Based on updated Senate Document 97 values, this equals a user value of $2,470,300.

Local Economy: Expenditures made to accomplish this recreation use would be at least equal to the estimated user benefit. The multiplier effect from this expenditure would result in a total economic benefit of about $4,644,160 to the communities where the money is spent.*

State Economy: Except for "imported" items manufactured outside of Oregon such as automobiles, gasoline, boats and motors, outdoor recreation expenditures are largely service oriented. Outdoor recreation expenditures provide a higher level of employment than do many other resource-based industries. Thus the impact on the state economy would be little more than the sum of the benefits from the local expenditures.

Future Demand: The Columbia-North Pacific Study shows that outdoor recreation demand in Oregon will increase by about 26% by 1980 and 79% by year 2000.[56] If BLM were to meet its share of the 1980 demand, there would be 2,647,260 recreation days use of BLM resources resulting in a local expenditure of about $3,112,580. Economic benefit from this expenditure would be about $5,851,640.

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*Using a multiplier of 1.88 from the Grant County Study, "Effects of Changes in Federal Land Use on a Rural Economy".[34]
(based on average of the Lodging sector and Cafe and Tavern Sectors)

Summary of Economic Benefits from BLM Lands in Oregon

Resource	User Benefit	Local Economy	National or State Economy	Economic Impact if 1980 Needs Are Met
Timber	$62,325,834	$157,023,814*	$471,071,442	$196,073,980**
Forage	2,957,379	5,145,837	n.a.	6,800,000
Wildlife	6,756,419	12,702,068	n.a.	15,757,700
Fishing	2,750,000	5,170,000	n.a.	7,186,300
Other Recreation	2,470,300	4,644,160	n.a.	5,851,640
TOTAL	77,259,932	184,685,879	471,071,442	231,669,620

*Based on a direct payroll from BLM stumpage of $110,940,794 and an income multiplier of 1.4139 (derived on a proportionate basis from a lumber and wood products multiplier of 1.51, plywood 1.26, pulp and paper 1.33)48/

**Based on a 25% increase in timber harvest.

Illustration I

District Summary of Production, Consumption and Needs Situation: 1970 and Projected to 1980

Item	Resource Products or Uses							
	Livestock Feed (AUM's)		Saw Timber (MBF)		Big Game Hunting (User Days)		Outdoor Recreation (Recreation Days)	
1970 Situation:	Total	BLM	Total	BLM	Total	BLM	Total	BLM
Production	1,030,800	22,139	62,700,000[24]	1,171.1	1,874,630	957,000	84,067,200	7,639,000
Consumption	1,030,800	22,139	77,070,000	1,171.1	1,874,630	957,000	93,367,200	8,479,290
Needs (excess demand	0	0	14,370,000*	0	0	0	9,300,000	840,290
Projection to 1980:								
Production	103,080	22,139	62,700,000	1,171.1	1,874,630	957,000	84,067,200	7,639,000
Consumption	125,280	29,223	86,857,890	1,171.1	2,174,570***	957,000	106,367,200	9,663,335
Needs (excess demand)	22,200	7,083	24,157,890**	450.9	299,940	153,120	22,300,000	2,024,335

This table shows (among other things):

1. Extent to which resources on BLM lands and other lands are being over- or under-utilized at present, and what changes are expected in the near future.
2. Relative importance of BLM lands and resources in meeting present and future needs.
3. Possibility of competing needs for same lands or resources.

*Imports[24]
**Indicates need for 38.5% increase in stumpage supply.
***A 16% increase in hunting demand is projected.[55]

Illustration II

District Summary of Amount and Incidence of Values Arising from Use of BLM Resources

Type and Recipient	Estimated Value of Product or Use Per Unit			
	Livestock Feed (AUM)	Saw Timber (MBF)	Hunting (User Day)	Outdoor Recreation
Monetary Value to:				
1. BLM [a]	433,810	62,325,834	0	0
2. Initial users [b]	2,957,379	62,325,834	5,359,200	2,470,300
3. Local economies [c]	5,145,837	157,023,814	10,075,294	4,644,160
4. National economy [d]	---	471,071,442*	---	---
Non-monetary Value to: [e]				
1. Initial users	3	1	5	5
2. Local communities	3	3	2	2
3. Major interest groups	5	5	5	5
a. ______	Nat'l Wildlife Fed.	Sierra Club	Nat'l Wildlife Fed.	Sierra Club
b. ______	Oregon Environ. Council	Ore. Environ. Co.	Izaak Walton League	Mazamas
c. ______	Friends of the Earth	Friends of Earth	Fed. West. Outdoor Clubs	Fed. West. Outdoor Clubs
d. ______	Fed. West. Outdoor Clubs	Nat'l Wildlife Fed.	Ore. Env. Council	Ore. Env. Council

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[a] Exchange price - not necessarily market value.

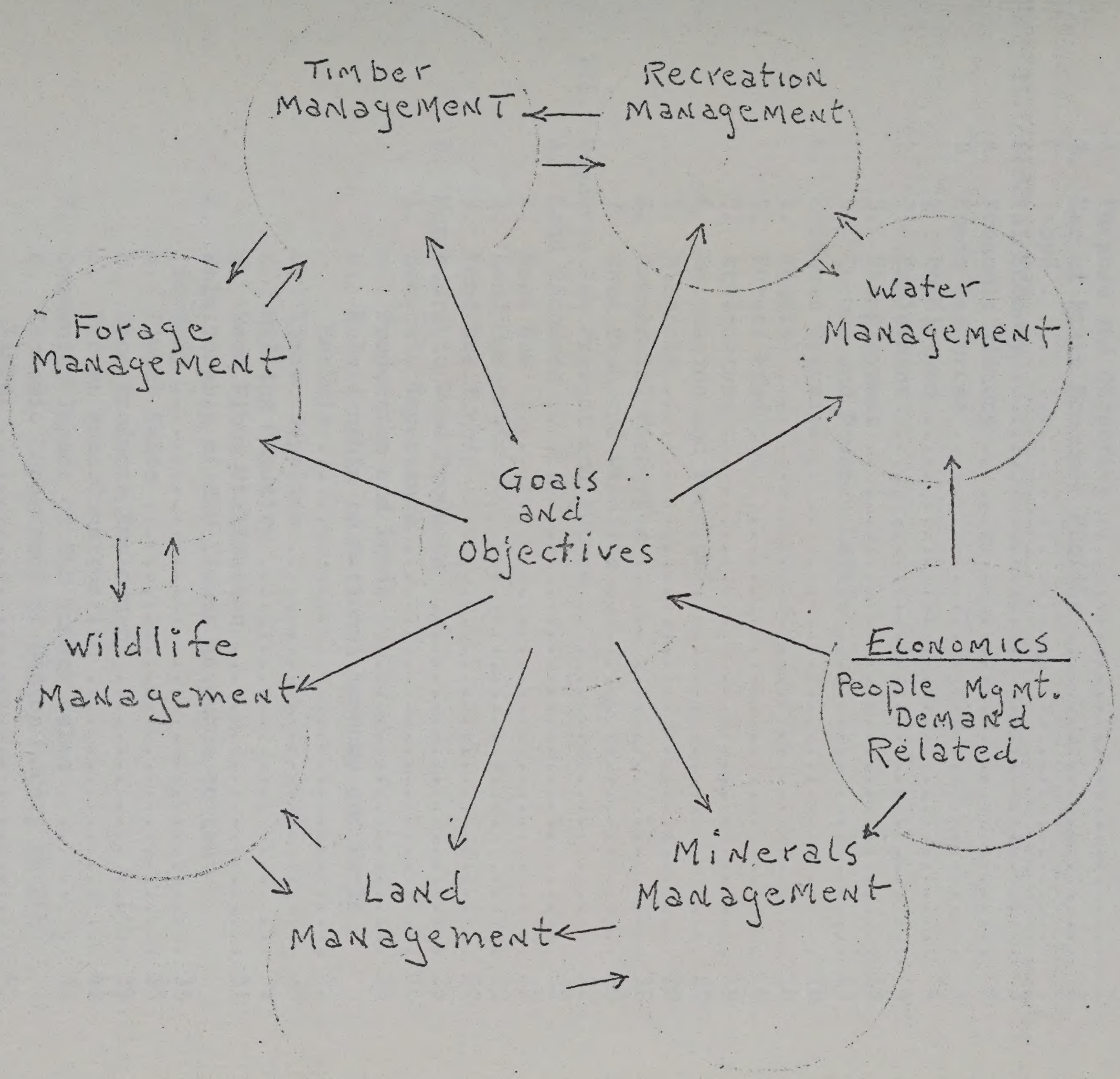
[b] Estimated market value.

[c] Local income multipliers for Resource Products should be used. These multipliers will vary from one area to another.

[d] No national income multipliers are used in this example. These may be required when significant quantities of a commodity are imported or exported at a national level.

[e] A 10-point rating system is used in this example: 5-high, 4-medium high, 3-medium, 2-medium low, and 1-low. Values can be either positive or negative and should be assigned by persons intimately familiar with public attitudes and opinions.

*For every employee in forest management, harvesting, and primary manufacture, 3 were employed in transportation, marketin
construction, and secondary manufacture[62]


Timber Management
Recreation Management
Forage Management
Water Management
Goals and Objectives
Wildlife Management
Economics
People Mgmt. Demand Related
Land Management
Minerals Management

The Role of Economics in Resource Management

TABLE OF CONTENTS

Page

I. Introduction and Background 1
- A. Purpose and Objective 1
- B. Use of State Economic Profile 1
- C. Scope 1

II. General Economy 3
- A. Economic History 3
- B. Human Resources 4
  - 1. Population 4
  - 2. Employment 4
  - 3. Unemployment 12
  - 4. Income and Poverty Levels 13
- C. Economic Overview 18
  - 1. General 18
  - 2. Forest Products 18
  - 3. Agriculture 19
  - 4. Recreation and Tourism 20
  - 5. Minerals 20
  - 6. Commercial Fisheries 20
  - 7. Game Fish and Wildlife 20

III. Resource Use Present and Future 22
- A. Land Resource 22
  - 1. Land Use 22
  - 2. Land Ownership 22
  - 3. Land Use Trends 22
- B. Merchantable Wood Products 26
  - 1. Economic Importance 26
    - a. Production and Trade 26
    - b. Relationship to National Economy and World Markets 27
    - c. Timber Supplies 28
    - d. Milling Capacity 31
    - e. Wood Fiber Utilization 31
  - 2. Relationship of BLM Timber Resource to the Economy 35
    - a. Timber Sales 35
    - b. Wood Products Employment 39
    - c. Forest Road Construction 42
  - 3. Community Impact of BLM Timber Sales 42
    - a. Economic Dependency of Benton County on BLM Timber 42
    - b. Economic Dependency of Clatsop County on BLM Timber 43
    - c. Economic Dependency of Columbia County on BLM Timber 45
    - d. Economic Dependency of Lincoln County on BLM Timber 47

Page
e. Economic Dependency of Polk County on BLM Timber 47
f. Economic Depencency of Tillamook County on BLM Timber 49
g. Economic Dependency of Washington County on BLM Timber 51
h. Economic Dependency of Yamhill County on BLM Timber 53
i. Economic Dependency of Clackamas County on BLM Timber 55
j. Economic Dependency of Linn County on BLM Timber 58
k. Economic Dependency of Marion County on BLM Timber 60
l. Economic Dependency of Multnomah County on BLM Timber 60
m. Economic Dependency of Lane County on BLM Timber 62
n. Economic Dependency of Douglas County on BLM Timber 68
o. Economic Dependency of Coos County on BLM Timber 73
p. Economic Dependency of Curry County on BLM Timber 76
q. Economic Dependency of Josephine County on BLM Timber 78
r. Economic Dependency of Jackson County on BLM Timber 80
s. Economic Dependency of Klamath County on BLM Timber 83
t. Economic Dependency of Counties in Baker District on BLM Timber 84
  (1) Baker County 84
  (2) Umatilla County 84
  (3) Union County 84
  (4) Wallowa County 85
  (5) Morrow County 85
u. Economic Dependency of Counties in Burns District on BLM Timber 87
  (1) Grant County 87
  (2) Harney County 87
v. Economic Dependency of Counties in Prineville District on BLM Timber 89
w. Economic Dependency of Counties in Lakeview District on BLM Timber 92
4. Summary 92
5. Impact on Local Economies from BLM Timber Sales . 94
  a. Impact of BLM 1970 Timber Sale Program 94
  b. Impact of a Change in Amount of Timber Sold . 98
  c. Economic Impact of Intensified Forest Management Practices 107
6. Future Forest Economy 109

Page

C. Use of Forage Resources on Public Lands 110
  1. General 110
  2. Value of the BLM Forage Resource 113
  3. Future Demand for Forage on Public Lands 116
  4. Economic Benefits from Increased Supplies of BLM Forage 116
D. Fish and Wildlife Resources on BLM Managed Lands in Oregon 116
  1. Consumptive Use 116
  2. Non-Consumptive Wildlife Use 126
  3. Economic Benefits from Wildlife 126
  4. Future Demand for Fishing 128
  5. Future Demand for Hunting 128
  6. Future Demand for Non-Consumptive Wildlife Use .. 128
E. Other Outdoor Recreation on BLM Lands 134
  1. General 134
  2. Economic Benefits from Outdoor Recreation Expenditures 137
    a. General 137
    b. Economic Benefits from Recreational Use of BLM Resources 137
  3. Future Outdoor Recreation Demand 137
F. Water Resource 147
  1. General 147
  2. Central Snake Area - Vale District 148
  3. Baker District 148
  4. Prineville District 150
  5. Salem and Eugene Districts 150
  6. Oregon Coastal Area 150
  7. Oregon Cloud Basin 152
G. Mineral Resources on BLM Lands 152

Bibliography 154-157
Appendix A - Employment, Unemployment and Poverty Indices ... 158
Appendix B - Overview of Oregon Wood Products Industry - Major Timber Companies 169
Appendix C - Oregon Forest Products Statistical Tables and Charts 175

CHARTS

Page

1. Schematic of BLM's Multiple Resource Use Planning System . 2
2. Manufacturing Employment for United States and Oregon 10
3. U.S. and Oregon Non-Agricultural Wage and Salary Workers Employment Index 11
4. Total Personal Income for U.S. and Oregon 1950-1969 15
5. Per Capita Personal Income for U.S. and Oregon 1950-1969 . 16
6. Cost of Living Indices for U.S. and Portland Consumer 1960-1969 17
7. Recreation Demand Zones from Portland 138
8. Log Production Trends Western Oregon 1962-1969 183
9. Softwood Plywood Production Trends by Region 1961-1972 ... 197

FIGURES

Page

1. Oregon Population Distribution 5
2. Oregon Counties with Persistent or Substantial Unemployment 14a
3. Forest Industry Survey Areas, Oregon 176
4. Log Consumption by Industry 176
5. Source of Sawlogs by Ownership 177
6. Veneer and Plywood Log Consumption by Area 177
7. Output of Major Timber Products in Oregon 1960-1968 185
8. Annual Sawtimber Production Trends 1870-1970 186
9. Log Production and National Forest Stumpage Price Trends 1950-1965 186
10. Oregon Worker Productivity in Logging Industry 1950-1975 192
11. Oregon Worker Productivity in Sawmill Industry 1950-1975 193
12. Oregon Worker Productivity in Plywood Industry 1950-1975 194
13. Capacity of Pulp and Board Mills by Type Mill and Area 1968 195

Page

41. Local Economic Benefits from BLM Timber Sales 1970 95
42. Economic Multipliers for Measuring Economic Impact of Sawmill Industry 97
43. Impact on Economy (wages) from a 150 mm b.f. Allowable Cut Stumpage 99
44. Impact on Economy (personal income) from a 150 mm b.f. Allowable Cut Stumpage 99
45. Impact on Economy of Douglas County from a 37.9 mm b.f. Reduction of Stumpage 99
46. Impact on Economy of Coos and Curry Counties from a 36 mm b.f. Reduction of Stumpage 100
47. Impact on Economy of Lane County from a 22 mm b.f. Increase in Stumpage 100
48. Impact on Economy of Counties in Medford District from a 18 mm b.f. Stumpage Reduction 101
49. Impact on Economy of Counties in Salem District from a 82 mm b.f. Stumpage Reduction 103
50. Impact on Economy of Alsea-Rickreall Master Unit Area, Salem District from a 35 mm b.f. Reduction 104
51. Impact on Economy of Clackamas-Molalla Master Unit Area, Salem District from a 9 mm b.f. Reduction 105
52. Impact on Economy of Marion and Linn Counties, Salem District from a 23 mm b.f. Reduction 106
53. Potential Economic Benefits from Intensified Timber Management Opportunities 108
54. Livestock Ranch Consolidation Trends in Oregon 111
55. Economic Trends in Livestock Production in Oregon 1964-1969 112
56. Value of BLM Resources by County and BLM District 1970 114
57. Economic Dependency of Oregon Counties on BLM Livestock Forage 115
58. Projected Demand for Beef in the United States 117
59. Economic Value to Local Communities from a 20% Increase in BLM Forage 118
60. Big Game Hunting in Oregon in 1969 by Area and BLM District 120
61. Upland Bird Hunting in Oregon by Area and BLM District 123
62. Waterfowl Hunting in Oregon by County and BLM District 124
63. Economic Benefits from Big Game Wildlife Resource on BLM Lands 129
64. Trade-Off Costs of Fisheries, Recreation and Environmental Protection on BLM Lands 130
65. Cost of Fisheries and Recreation on BLM Forest Land in Western Oregon 131
66. Projected Increase in Sport Fishing in Oregon to Year 2000 . 132
67. Projected Increase in Shellfish and Marine Fishing to Year 2000 132
68. Projected Increased Hunting Demands in Oregon to Year 2000 . 133
69. Outdoor Recreation Demand Trends in Oregon 135
70. Value of Outdoor Recreation and Tourism 136
71. Economic Benefits from Use of BLM Lands in Oregon 139
72. Projected Increased Outdoor Recreation Demand in Vale District Area 141

Page

73. Projected Increased Outdoor Recreation Demand in Baker District Area 142
74. Projected Increased Outdoor Recreation Demand in Prineville District Area 143
75. Projected Increased Outdoor Recreation Demand in Willamette Basin 144
76. Projected Increased Outdoor Recreation Demand in Coastal Area 145
77. Projected Increased Outdoor Recreation Demand in Oregon Closed Basin 146
78. Average Water Runoff from BLM Lands in Oregon by District .. 147
79. Additional Irrigation Water Needs in the Vale District 149
80. Irrigation Water Needs in North Central Oregon 151
81. Oregon Employment by County and Industry 159
82. Oregon Payrolls by County 1969 161
83. Personal Income Trends for Oregon Counties 163
84. Unemployment in Oregon Counties 165
85. Poverty Indices for Oregon Counties 1966 167
86. Area of Commercial Forest Land and Volume of Sawtimber in Pacific Northwest 178
87. Ratio of Forest Growth to Annual Cut in Oregon 1962 179
88. Distribution of Timber Growing Stock in Western Oregon 180
89. Roundwood Consumption by Wood Products Industry 1965-2020 .. 181
90. Output of Timber Products in Pacific Northwest 1965 182
91. Log Production Western Oregon 1962-1969 183
92. Forest Industry Capacity in Western Oregon 184
93. Timber Product Demand Trends in the United States 1952-1985 187
94. Present and Projected Forest Industry Employment Levels in Oregon 188
95. Employment in the Lumber and Wood Products Industry 1950-1975 189
96. Employment and Productivity Rates in the Sawmill Industry 1950-1975 190
97. Employment and Productivity Rates in the Plywood and Veneer Industry 1950-1975 191
98. Dependency of Oregon Veneer and Plywood Mills for Logs by Ownership and Area 196
99. Number of Pulp and Board Mills in Oregon by Type, Area and County 198
100. Installed Capacity of Pulp and Board Mills in Oregon by Area and County 199
101. Ownership Origin of Logs Consumed by Pulp and Board Mills in Oregon 200
102. Relative Dependency of Pulp and Board Plants for Logs by Ownership and Area 201
103. Economic Impact of Pulp and Paper Industry in Oregon 202
104. Number of Shake and Shingle Mills in Oregon by Area and County 1968 203
105. Average Number of Operating Days per Year by Shake and Shingle Mills 204

Page

106. Timber Harvest by Ownership in Oregon 1968 205
107. Timber Harvest by Ownership in Oregon 1970 206
108. Employment Creditable BLM Forest Resources in Western Oregon 1969 207
109. Federal Land Ownership by Agency and County 208

ECONOMIC PROFILE

FOR BLM MANAGED LANDS IN THE STATE OF OREGON

I. Introduction and Background

A. Purpose and Objective

Lands managed by the Bureau of Land Management cover 25.8% of the total acreage of the State of Oregon. It is obvious that the way the resources on these lands are managed has an impact on the economy of the state. The purpose of this economic profile is to (1) show the relationship of these resources to Oregon's economy, (2) report trends and indicated future needs for resources from these lands, (3) evaluate the probable economic consequences of various resource management alternatives.

The objective of this document is both to provide data for dealing with economic questions which arise during implementation of the planning system and to provide an input for justification of proposed bureau programs.

B. Use of the State Economic Profile

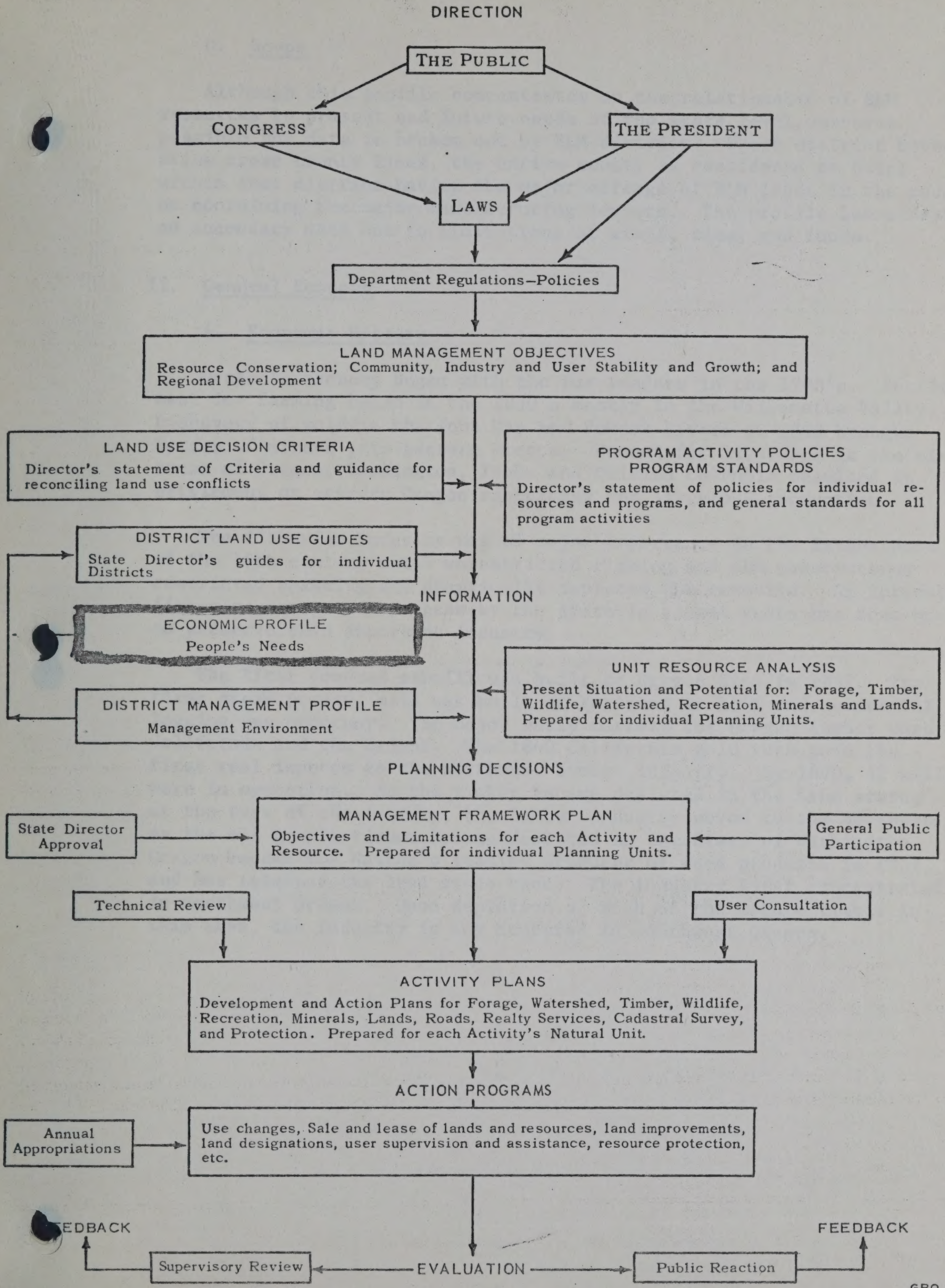
The Bureau of Land Management is committed by law and regulation to a program of multiple use of the public lands. Multiple use requires a careful combination of uses and activities on the land to best serve the public. Information is needed to help develop goals and to translate goals into actions. Knowledge of resource problems and potentials and the public needs that the resource might serve is essential. BLM's multiple resource use management program is based on detailed resource inventories and analyses. The economic profile is just one component of BLM's planning system as shown on chart number 1. In it are shown population projections, industry requirements, and other factors related to demand for and the economic significance of the various public land resources. The Economic Profile is also a source document providing data for updating District Economic Supplements.

It must be emphasized that the dollar values shown for resources such as recreation and wildlife are tentative and represent minimal values as opposed to optimal values used for the timber and forage resources. This gives a bias in favor of timber growing over other land uses in western Oregon. This should be kept in mind when using the data presented herein. In other words the values derived for recreation and wildlife are rough and are presented only to provide a general idea of the value of these resources.

April 1, 1972

Chart 1

MULTIPLE USE MANAGEMENT


DIRECTION
THE PUBLIC
CONGRESS
THE PRESIDENT
LAWS
Department Regulations—Policies
LAND MANAGEMENT OBJECTIVES
Resource Conservation; Community, Industry and User Stability and Growth; and Regional Development
LAND USE DECISION CRITERIA
Director's statement of Criteria and guidance for reconciling land use conflicts
PROGRAM ACTIVITY POLICIES
PROGRAM STANDARDS
Director's statement of policies for individual resources and programs, and general standards for all program activities
DISTRICT LAND USE GUIDES
State Director's guides for individual Districts
INFORMATION
ECONOMIC PROFILE
People's Needs
UNIT RESOURCE ANALYSIS
Present Situation and Potential for: Forage, Timber, Wildlife, Watershed, Recreation, Minerals and Lands. Prepared for individual Planning Units.
DISTRICT MANAGEMENT PROFILE
Management Environment
PLANNING DECISIONS
State Director Approval
MANAGEMENT FRAMEWORK PLAN
Objectives and Limitations for each Activity and Resource. Prepared for individual Planning Units.
General Public Participation
Technical Review
User Consultation
ACTIVITY PLANS
Development and Action Plans for Forage, Watershed, Timber, Wildlife, Recreation, Minerals, Lands, Roads, Realty Services, Cadastral Survey, and Protection. Prepared for each Activity's Natural Unit.
ACTION PROGRAMS
Annual Appropriations
Use changes, Sale and lease of lands and resources, land improvements, land designations, user supervision and assistance, resource protection, etc.
EDBACK
FEEDBACK
Supervisory Review
EVALUATION
Public Reaction

C. Scope

Although this profile concentrates on the relationship of BLM resources to present and future needs at the state level, wherever possible the data is broken out by BLM district. Where district boundaries cross county lines, the entire county is considered as being within that district having the major acreage of BLM lands in the county or containing the major manufacturing centers. The profile leans heavily on secondary data due to limitations of staff, time, and funds.

II. General Economy

A. Economic History

Oregon's economy began with the fur traders in the 1780's. Settlement for farming began in the 1830's mostly in the Willamette Valley. Discovery of gold in the John Day and Powder Rivers in 1860 brought hordes of miners into eastern Oregon. Demand for livestock in the mining areas of Oregon, Washington, Idaho and British Columbia resulted in settlement on eastern Oregon rangelands for livestock production.

The fisheries industry was of major importance in the latter part of the 19th century until unrestricted fishing and dam construction restricted spawning and drastically depleted the resource. An intensive fisheries management program by the state in recent years has done much to preserve this important industry.

The first powered sawmill was built at Oregon City in 1832. The first steam powered mill was built at Portland in 1850 and commercial logging was underway. The major early markets for Oregon lumber were California and the Orient. The 1849 California gold rush gave the first real impetus to the northwest lumber industry. By 1870, 42 mills were in operation. As the timber became depleted in the Lake states at the turn of the century, the lumber industry moved to the northwest. As the old growth timber became depleted in the State of Washington, Oregon became the Nation's leading producer of wood products in 1937 and has retained the lead since then. The industry first concentrated in northwest Oregon. Upon depletion of much of the mature timber in this area, the industry is now centered in southwest Oregon.

B. Human Resources

1. Population

Table 1 shows that Oregon's population increased 18.2% between 1960 and 1970, nearly 2% above the rate of growth from 1950 to 1960. It shows that most of the increase was in urban areas whereas many of the rural areas were losing population. Several eastern Oregon counties lost population during the past decade. Rural population decreased in a majority of the counties. Table 2 shows substantial out migration from the Roseburg, Coos Bay, Baker, Vale, Lakeview and Burns BLM Districts. Figure 1 graphically shows the distribution of Oregon's population.

Oregon's population is expected to increase from the 1970 level of 2,091,000 to 2,421,000 by 1980, using the conservative series I-E projections of the Bureau of Census. This equals a 15.8% increase, a 2.4% drop from that of 1960 to 1970. Nearly all the population increase will be in the urban areas. Oregon's population will be increasing at a faster rate than the national average which is projected to increase by only 11.7% by 1980.

Analysis of population change on a county basis should be made as soon as Bureau of Census data on Social and Economic Characteristics becomes available. This should be released within the year.

2. Employment

In 1969 there were 25,000 more workers employed in covered industries in Oregon than in 1968, an increase of 4.6%. The rising employment trend came to an end in June 1969 and declined steadily for the balance of the year. Primary cause of this decrease was the worsening economic condition of the lumber industry where there was an overall loss of 4608 jobs. Wholesale and retail trade showed the strongest growth, adding 8000 employees during the year.

Charts 2 and 3 show comparisons of employment in Oregon and the United States. Payrolls of industries covered by unemployment compensation in Oregon increased by 47.2% between 1960 and 1969, from $2,038,854 to $3,864,528. Table 3 shows that the percentage of employment in both food products and wood products has decreased in the past 10 years. It also shows that percentage of employment in the wood products industry is only half what it was in 1950. This reflects higher productivity per worker as well as a decline in timber supplies. Although many logs are now going into the export trade, processing the logs for export is found to provide nearly as much employment as would have been provided by initial milling in Oregon.[13] Table 82 shows the relationship of the wood products payrolls to payrolls of other sources of employment by county.

B. Human Resources

1. Population

Table 1 shows that Oregon's population increased 18.2% between 1960 and 1970, nearly 2% above the rate of growth from 1950 to 1960. It shows that most of the increase was in urban areas whereas many of the rural areas were losing population. Several eastern Oregon counties lost population during the past decade. Rural population decreased for a majority of the counties. Table 2 shows substantial out migration from the Prineville, Coos Bay, Baker, Vale, Lakeview and Burns BLM Districts. Figure 1 graphically shows the distribution of Oregon's population.

Oregon's population is expected to increase from the 1970 level of 2,091,000 to 2,411,000 by 1980, using the conservative series "E" projections of the Bureau of Census. This equals a 15.3% increase, a 2.9% drop from that of 1960 to 1970. Nearly all the population increase will be in the urban areas. Oregon's population will be increasing at a faster rate than the national average which is projected to increase by only 11.1% by 1980.

Analysis of population change on a county basis should be made as soon as Bureau of Census data on Social and Economic Characteristics become available. This should be released within the year.

2. Employment

In 1969 there were 33,000 more workers employed in covered industries in Oregon than in 1968, an increase of 6.1%. The rising employment trend came to an end in June 1969 and declined steadily for the balance of the year. Primary cause of this downturn was the tremendous reduction of the lumber industry where there was an overall loss of 4000 jobs. Wholesale and retail trade showed the greatest growth, adding 8000 employees during the year.

Charts 6 and 7 show comparisons of employment in Oregon and the United States. Payrolls of industries covered by unemployment insurance laws in Oregon increased by 47.2% between 1961 and 1969, from $2,110,000 to $3,106,000. Table 3 shows that the percentage of employment in both food products and wood products has decreased in the past 10 years. It also shows that the percentage of employment in the wood products industry is only half what it was in 1950. This reflects higher productivity per worker as well as a decline in timber supplies. Although many logs are now going into the export trade, processing the logs for export in Japan is [illegible] such employment as would have been provided by domestic milling in Oregon. Table 4a shows the relationship of the wood products payrolls to payrolls of other sources of employment by county.

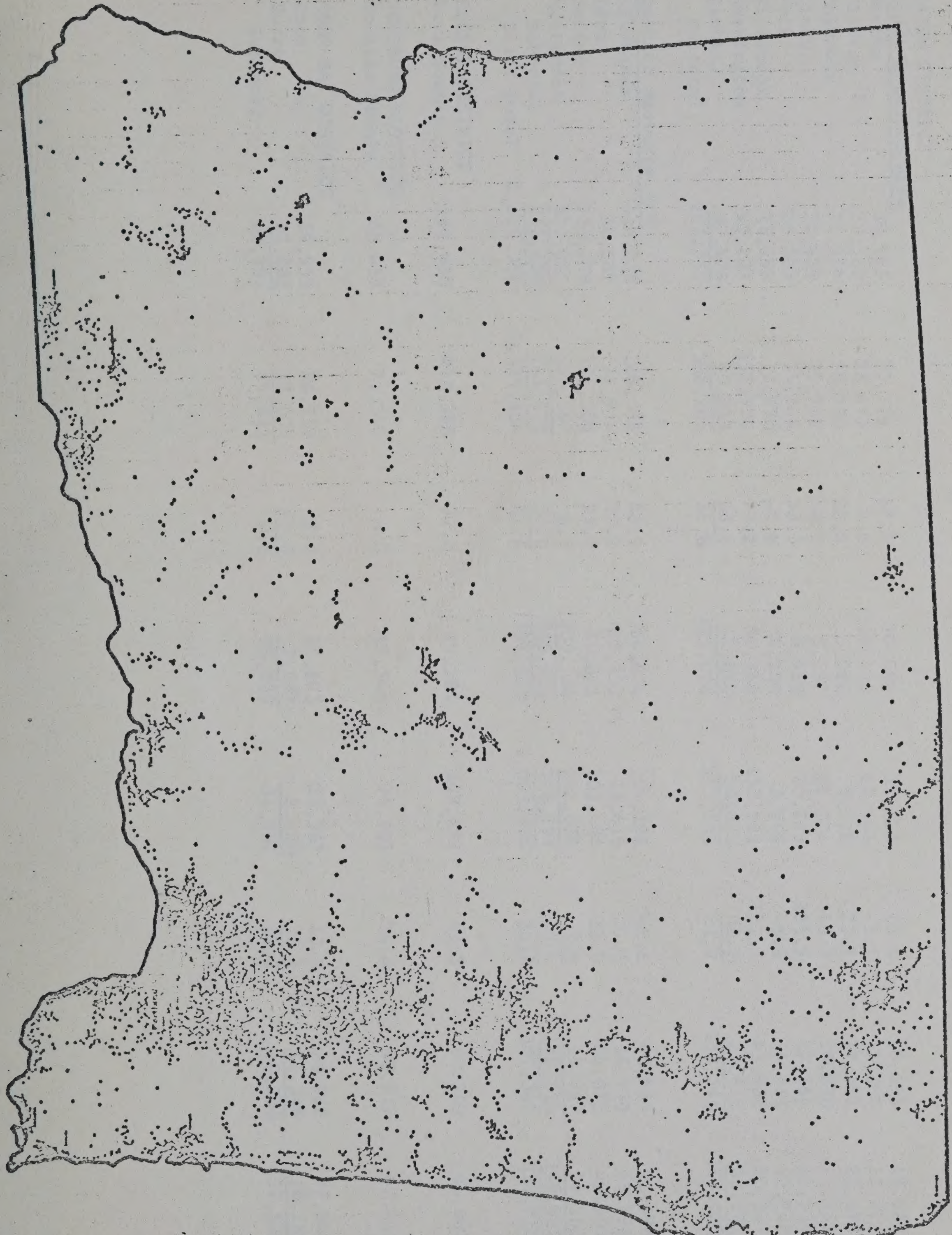


Figure 1 Oregon Population Distribution
Each Dot = 100 people (1960 Census)

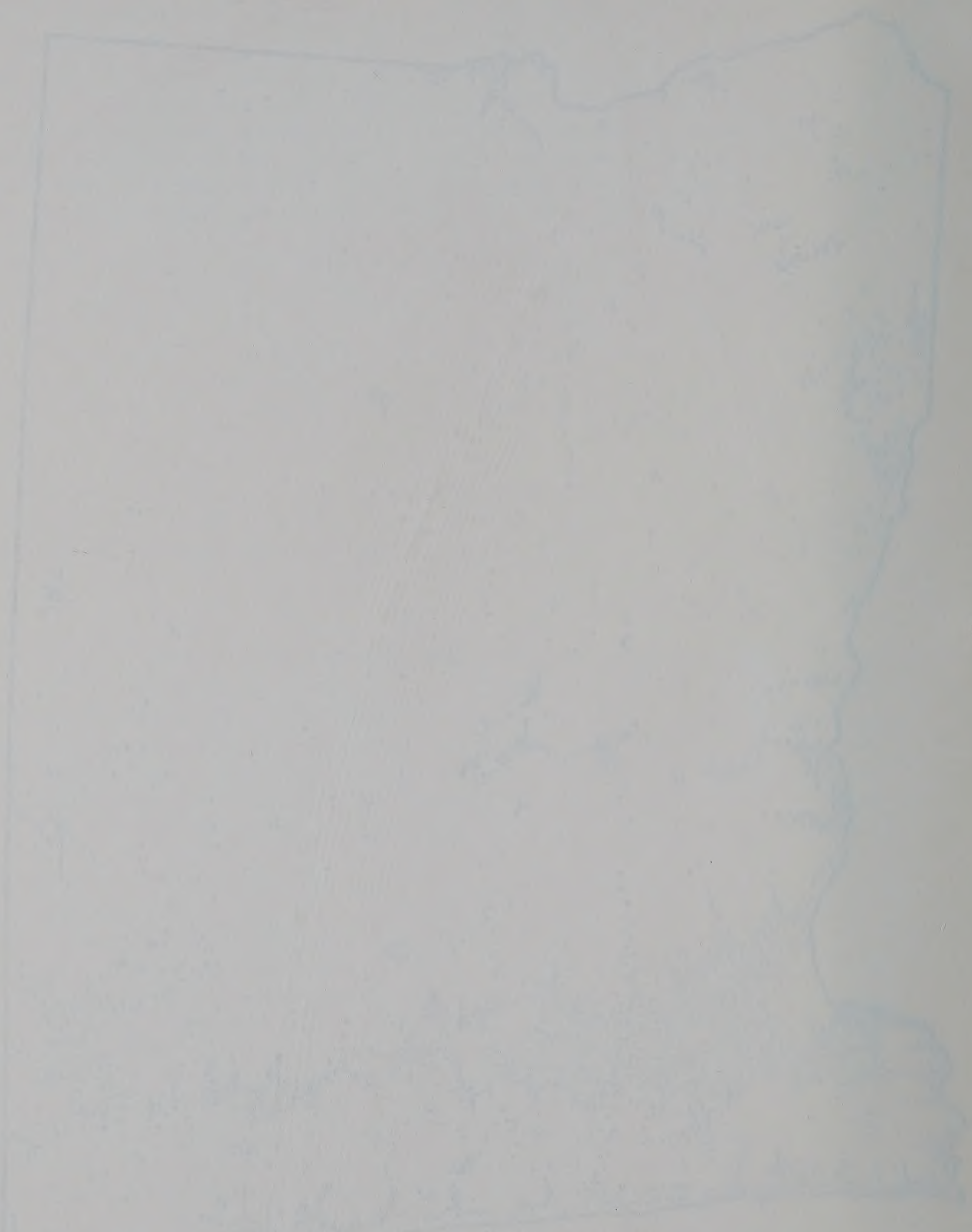


Table 1

Oregon Population Change By County[4/] 1960-1970

District & County	Total Population 1960	Total Population 1970	Total Population % Change	Urban Population 1960	Urban Population 1970	Urban Population % Change	Rural Population 1960	Rural Population 1970	Rural Population % Change
SALEM DISTRICT									
Coast Resource Area									
Benton	39,165	53,776	37.3	20,669	35,153	70.1	18,496	18,623	0.7
Clatsop	27,380	28,473	4.0	15,116	14,646	-3.1	12,264	13,827	12.7
Columbia	22,379	28,790	28.6	5,022	6,212	23.7	17,357	22,578	30.1
Lincoln	24,635	25,755	4.5	8,397	12,204	45.3	16,238	13,551	-16.5
Polk	26,523	35,349	33.3	8,969	20,795	131.9	17,554	14,554	-17.1
Tillamook	18,955	17,930	-5.4	4,244	3,968	-6.5	14,711	13,962	-5.1
Washington	92,237	157,920	71.2	50,749	117,573	131.7	41,488	40,347	-2.8
Yamhill	32,478	40,213	23.8	11,860	16,632	40.2	20,618	23,581	14.4
Subtotal	283,752	388,206	36.8	125,026	227,183	81.7	158,546	161,023	1.6
Cascade Resource Area									
Clackamas	113,038	166,088	46.9	64,074	104,192	62.6	48,964	61,896	26.4
Linn	58,867	71,914	22.2	22,137	28,616	29.3	36,730	43,298	17.9
Marion	120,888	151,309	25.2	76,815	101,404	32.0	44,073	49,905	13.2
Multnomah	522,813	556,667	6.5	503,766	542,079	7.6	19,047	14,588	-23.4
Subtotal	815,606	945,978	16.0	666,792	776,291	16.4	148,814	169,687	14.0
Dist. Total	1,099,358	1,334,184	21.4	791,818	1,003,474	26.7	307,360	330,710	7.6
EUGENE DISTRICT									
Lane County	162,890	213,358	31.0	99,581	148,681	49.3	63,309	64,667	2.2
ROSEBURG DISTRICT									
Douglas County	68,458	71,743	4.8	19,541	24,303	24.4	48,917	47,440	-3.0
COOS BAY DISTRICT									
Coos	54,955	56,515	2.8	25,993	28,967	11.4	28,962	27,548	-4.9
Curry	13,983	13,006	-7.0	2,637	2,720	3.1	11,346	10,286	-9.3
Subtotal	68,938	69,521	0.8	28,630	31,687	10.7	40,308	37,834	-6.1

APR 1 1972

Table 1 (Cont.)

District & County	Total Population			Urban Population			Rural Population		
	1960	1970	% Change	1960	1970	% Change	1960	1970	% Change
MEDFORD DISTRICT									
Jackson	73,962	94,533	27.8	33,544	52,216	55.7	40,418	42,317	4.7
Josephine	29,917	35,746	19.5	10,118	18,541	83.2	19,799	17,205	-13.1
Klamath	47,475	50,021	5.4	27,760	31,521	13.5	19,715	18,500	-6.2
Subtotal	151,354	180,300	11.9	71,422	102,278	14.3	79,932	78,022	-2.4
BAKER DISTRICT									
Baker	17,295	14,919	-13.7	9,986	9,354	-6.3	7,309	5,565	-23.9
Morrow	4,871	4,465	-8.3	0	0	0	4,871	4,465	-8.3
Umatilla	44,352	44,923	1.3	22,946	22,195	-3.3	21,406	22,728	6.2
Union	18,180	19,377	6.6	9,014	9,645	7.0	9,166	9,732	6.2
Wallowa	7,102	6,247	-12.0	0	0	0	7,102	6,247	-12.0
Subtotal	91,800	89,931	-2.0	41,946	41,194	-1.8	49,854	48,737	-2.2
PRINEVILLE DISTRICT									
Crook	9,430	9,985	5.9	3,263	4,101	25.7	6,167	5,884	-4.6
Deschutes	23,100	30,442	31.8	15,276	17,431	14.1	7,824	13,011	66.3
Gilliam	3,069	2,342	-23.7	0	0	0	3,069	2,342	-23.7
Jefferson	7,130	8,548	19.9	0	0	0	7,130	8,548	19.9
Sherman	2,446	2,139	-12.6	0	0	0	2,446	2,139	-12.6
Wasco	20,205	20,133	- 0.4	10,493	10,423	-0.7	9,712	9,710	0
Wheeler	2,722	1,849	-32.1	0	0	0	2,722	1,849	-32.1
Subtotal	68,102	75,438	11.1	29,032	31,955	11.0	39,070	43,483	11.1
VALE DISTRICT									
Malheur	22,764	23,169	1.8	7,712	9,143	18.6	15,052	14,026	-6.8
LAKEVIEW DISTRICT									
Lake	7,158	6,343	-11.4	3,260	2,705	-17.0	3,898	3,638	-6.7
BURNS DISTRICT									
Grant	7,726	6,996	-9.4	0	0	0	7,726	6,996	-9.4
Harney	6,744	7,215	7.0	3,523	3,293	-6.5	3,221	3,922	21.8
Subtotal	14,470	14,211	-1.8	3,523	3,293	-6.5	10,947	10,918	-0.3
OREGON	1,768,687	2,091,385	18.2	1,100,122	1,402,704	27.5	668,565	688,681	3.0
UNITED STATES	179,323,175	203,184,772	13.3						

APR 1 1972

Table 2

Population Density In Oregon Counties 1970[4]

County	Population Growth Ranking	Population Density Per Sq. Mile	Net Migration 1960 - 1966
SALEM DISTRICT			
Coast Resource Area			
Benton	10	80.5	6,000
Clatsop	18	34.7	-2,600
Columbia	17	44.6	2,700
Lincoln	19	26.1	-200
Polk	15	48.0	3,800
Tillamook	23	16.1	-2,400
Washington	4	220.6	28,000
Yamhill	13	56.7	4,700
Subtotal			40,000
Cascade Resource Area			
Clackamas	3	88.0	24,600
Linn	7	31.4	1,600
Marion	5	129.0	13,100
Multnomah	1	1,312.9	-14,000
Subtotal			25,300
District Total			65,300
EUGENE DISTRICT			
Lane County	2	46.8	19,700
ROSEBURG DISTRICT			
Douglas County	8	14.2	-2,200
COOS BAY DISTRICT			
Coos	9	35.1	-5,700
Curry	26	8.0	-2,400
Subtotal			-8,100

APR 1 1972

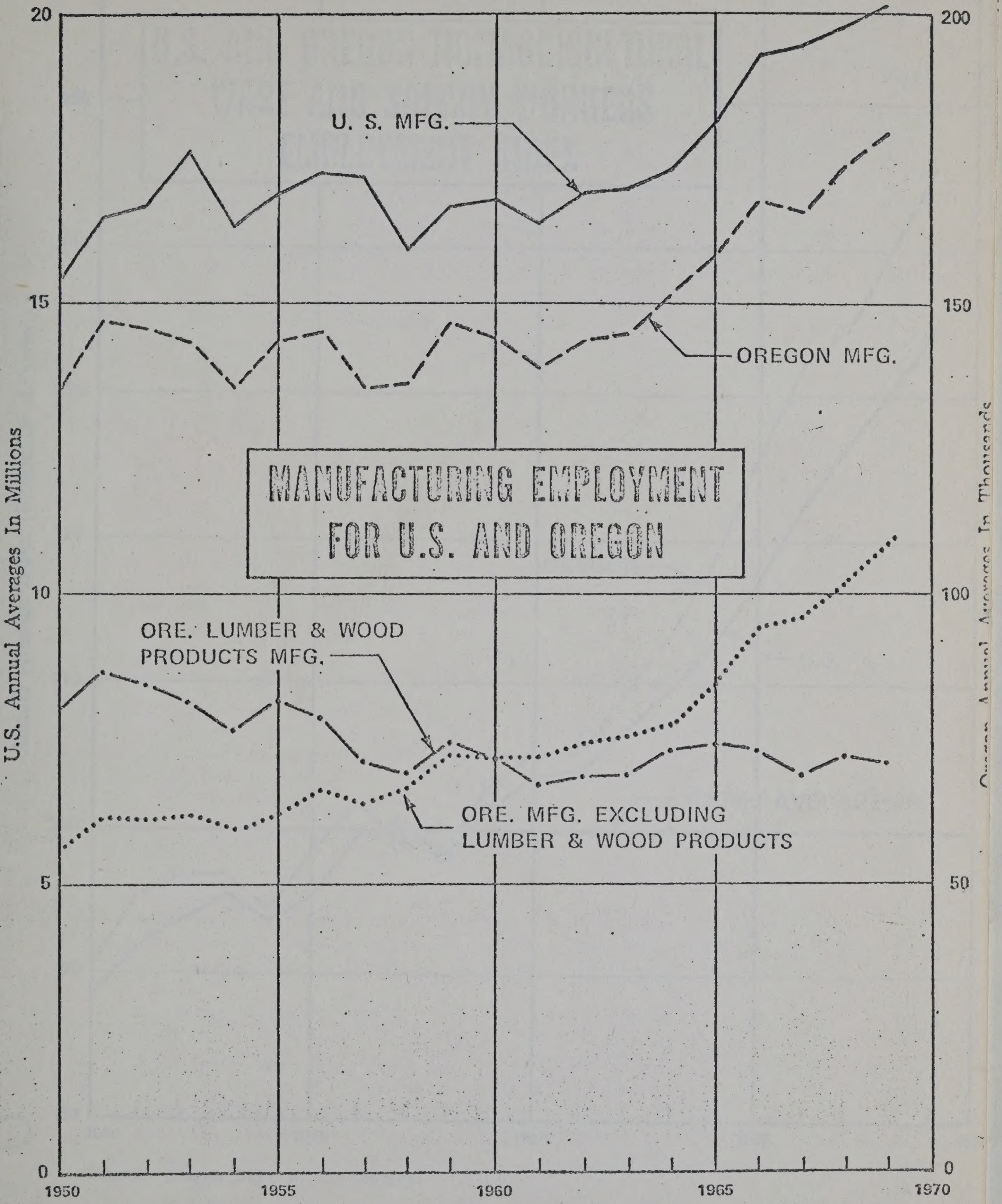
Table 2 (Cont.)

Population Density In Oregon Counties 1970[4/]

County	Population Growth Ranking	Population Density Per Sq. Mile	Net Migration 1960 - 1966
MEDFORD DISTRICT			
Jackson	6	33.6	12,700
Josephine	14	22.0	5,500
Klamath	11	8.4	-2,200
Subtotal			16,000
BAKER DISTRICT			
Baker	24	4.9	-2,200
Morrow	33	2.2	-800
Umatilla	12	13.9	-2,200
Union	22	9.5	less than 50
Wallowa	32	2.0	-700
Subtotal			-5,900
PRINEVILLE DISTRICT			
Crook	27	3.4	less than 50
Deschutes	16	10.1	3,000
Gilliam	34	1.9	-700
Jefferson	28	4.8	900
Sherman	35	2.6	100
Wasco	21	8.5	400
Wheeler	36	1.0	-1,100
Subtotal			2,600
VALE DISTRICT			
Malheur	20	2.3	-400
LAKEVIEW DISTRICT			
Lake	31	0.8	-1,300
BURNS DISTRICT			
Grant	30	1.5	-1,000
Harney	29	0.7	200
Subtotal			-800

APR 1 1972

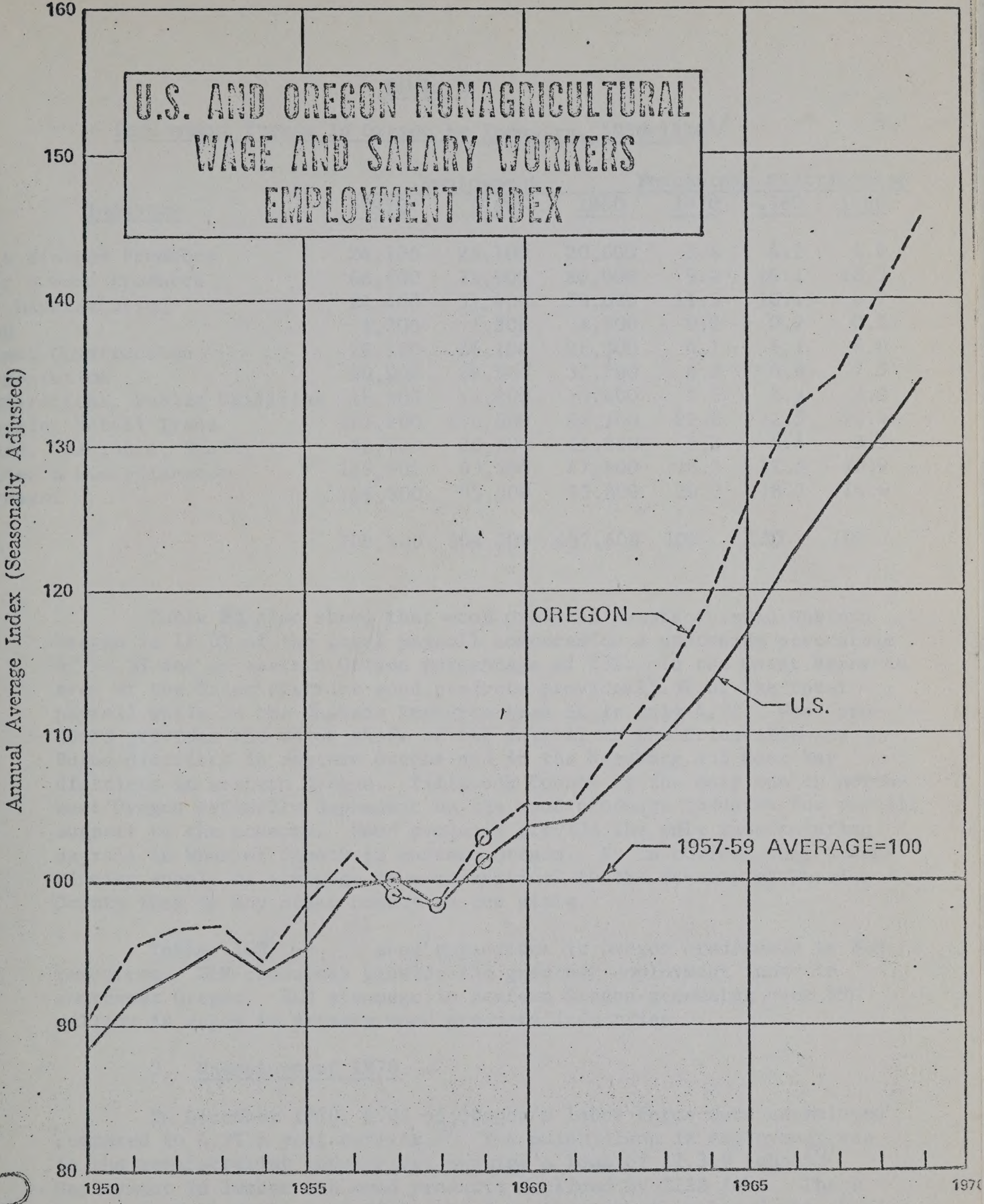
CHART 2



Sources: Employment and Earnings, Dec. 1969
U. S. Department of Labor
Survey of Current Business

Taken from "The Oregon Economy and Outlook", Governor's Office, State of Oregon, 1970.

CHART 3



Source: Oregon Dept. of Employment

Taken from "The Oregon Economy and Outlook", Governor's Office, State of Oregon, 1970.

Table 3

Employment Trends in Oregon by Industry, 1950-1970[4]

Industry	Employment 1970	Employment 1960	Employment 1950	Percentage Distribution 1970	Percentage Distribution 1960	Percentage Distribution 1950
Food & Kindred Products	24,100	21,100	20,000	3.4	4.1	4.6
Lumber & Wood Products	66,600	71,900	80,000	9.4	14.1	18.3
Other Manufacturing	81,400	51,400	38,000	11.5	10.1	8.7
Mining	1,300	1,200	1,300	0.2	0.2	0.3
Contract Construction	29,100	26,100	26,300	4.1	5.1	6.0
Transportation	30,000	29,500	32,700	4.2	5.8	7.5
Communications, Public Utilities	18,300	14,900	14,400	2.6	2.9	3.3
Wholesale, Retail Trade	161,900	113,600	98,100	22.8	22.3	22.4
Finance, Insurance, Realty	36,000	20,700	15,200	5.1	4.1	3.5
Services & Miscellaneous	113,900	63,500	47,800	16.1	12.5	10.9
Government	146,500	95,300	63,800	20.7	18.7	14.6
TOTAL	709,100	509,200	437,600	100	100	100

Table 82 also shows that wood products manufacture in western Oregon is 14.0% of the total payroll compared to a statewide percentage of 14.5% and an eastern Oregon percentage of 23%. In the Coast Resource area of the Salem district wood products provides15.3% of the total payroll while in the Cascade Resource Area it is only 4.7%. Wood products provides the major share of the payroll in the Prineville and Burns districts in eastern Oregon and in the Roseburg and Coos Bay districts in western Oregon. Tillamook County is the only one in northwest Oregon primarily dependent on the wood products industry for payroll support to the economy. Wood products provide the only manufacturing payroll in Wheeler County in eastern Oregon. It is obvious that a continuing supply of stumpage is more critical to the economy of Wheeler County than in any other county in the state.

Table 108 shows employment in Oregon creditable to BLM resources. BLM resources provide the greatest employment input in southwest Oregon. BLM stumpage in western Oregon generates over $90 million in wages in primary wood products industries.

3. Unemployment 1970

In December 1970, 6.8% of Oregon's labor force were unemployed compared to 4.9% a year earlier.[9] The major slump in employment was in the manufacturing industries, showing a loss of 11,319 jobs.[10] Employment in lumber and wood products declined by 2128 jobs. There was an overall decline of 7545 jobs from the number employed the third period of 1969.[10] Thus 28% of the decline in employment occurred in the wood products industry.

APR 1 1972

The tight money situation also resulted in a loss of 3448 jobs in contract construction in addition to its impact on the woods product industry.

From 1964 covered payrolls in Oregon have been increasing by about 10% per year. The increase in 1970 was only 4.3%, due largely to the cutback in basic industry employment and its impact on the rest of the economy.[10]

Table 84 shows that the unemployment problem is worse in eastern Oregon than in western Oregon. It also shows the unemployment is worse in the Coos Bay District than in other western Oregon areas. On a county basis, Yamhill County had the highest unemployment of any Oregon County. The table also shows that unemployment is a worse problem now than in 1960. Table 4 shows Oregon areas having "substantial" or "persistent" unemployment indicating areas where intensified resource management programs should be given special consideration.

4. Income and Poverty Levels

Table 81 shows that the service industries are centered in northwest Oregon, namely Multnomah and Marion Counties. The high percentage of service industry in Marion County reflects the large number of state government employees. That is Multnomah County reflects high employment in wholesale and retail trade. The Coast Resource Area of the Salem District is highly dependent on basic industry whereas the Cascade Resource Area is primarily dependent on service industries. This is because Portland is the major trading area for Oregon and southern Washington and its economy is not dependent upon processing of natural resources. On a statewide basis one job in basic industry supports 2,223 jobs in service type industries.[32]

Table 85 shows that the lowest effective buying incomes are found in eastern Oregon. It is lowest in Malheur County followed closely by counties in the Baker District. Percentage of families in the poverty classification in Oregon is higher than the national norm. The Roseburg, Medford, Baker, Burns and Vale districts have a higher poverty level than the national norm.

Charts 4-6 graphically portray comparisons of Oregon incomes and cost of living with that in the United States.

From Table 83 we see that personal income has increased at a faster rate in western Oregon than in eastern Oregon. People in eastern Oregon receive only about 12% of the state total personal income. This is to be expected inasmuch as most of the manufacturing industries and the service industries are located in western Oregon.

APR 1 1972

Table 4

Public Works and Economic Development Act

Areas of Substantial or Persistent Unemployment *
Under Title I. or Title IV.

October 18, 1971

Areas Which Meet Criteria Under Title I.

	Maximum Grant Rate
*Baker County	50%
*Clatsop County	50%
*Columbia County	50%
*Deschutes County	50%
*Grant County	50%
*Lane County	50%
*Linn County	50%
*Marion-Polk Counties	50%
*Klamath County	50%
*Morrow County	50%
Tillamook County	50%
*Union County	50%

**Gilliam and Malheur Counties do not meet criteria for substantial or persistent unemployment, but have been held over under new legislation for EDA benefits if local action is taken for eligibility requirements.

Areas Which Meet Criteria Under Title IV.

Coos County	60%
*Crook County	60%
Curry County	60%
Douglas County	50%
Hood River County	60% **
Jackson County	60%
*Jefferson County	60%
Josephine County	80%
*Lake County	60%
Lincoln County	50%
*Sherman County	50% ***
Umatilla Indian Reservation	80-100%
Wallowa County	50%
Warm Springs Indian Reservation	80-100%
Wasco County	50% ***
*Wheeler County	50%
Yamhill County	50%
Umatilla County	50%

**70% after District approval.
***60% after District approval.

Special Impact Area

City of Portland--Central City unemployment area being proposed for designation.

* data Provided by Dpt. Health Education, & Welfare

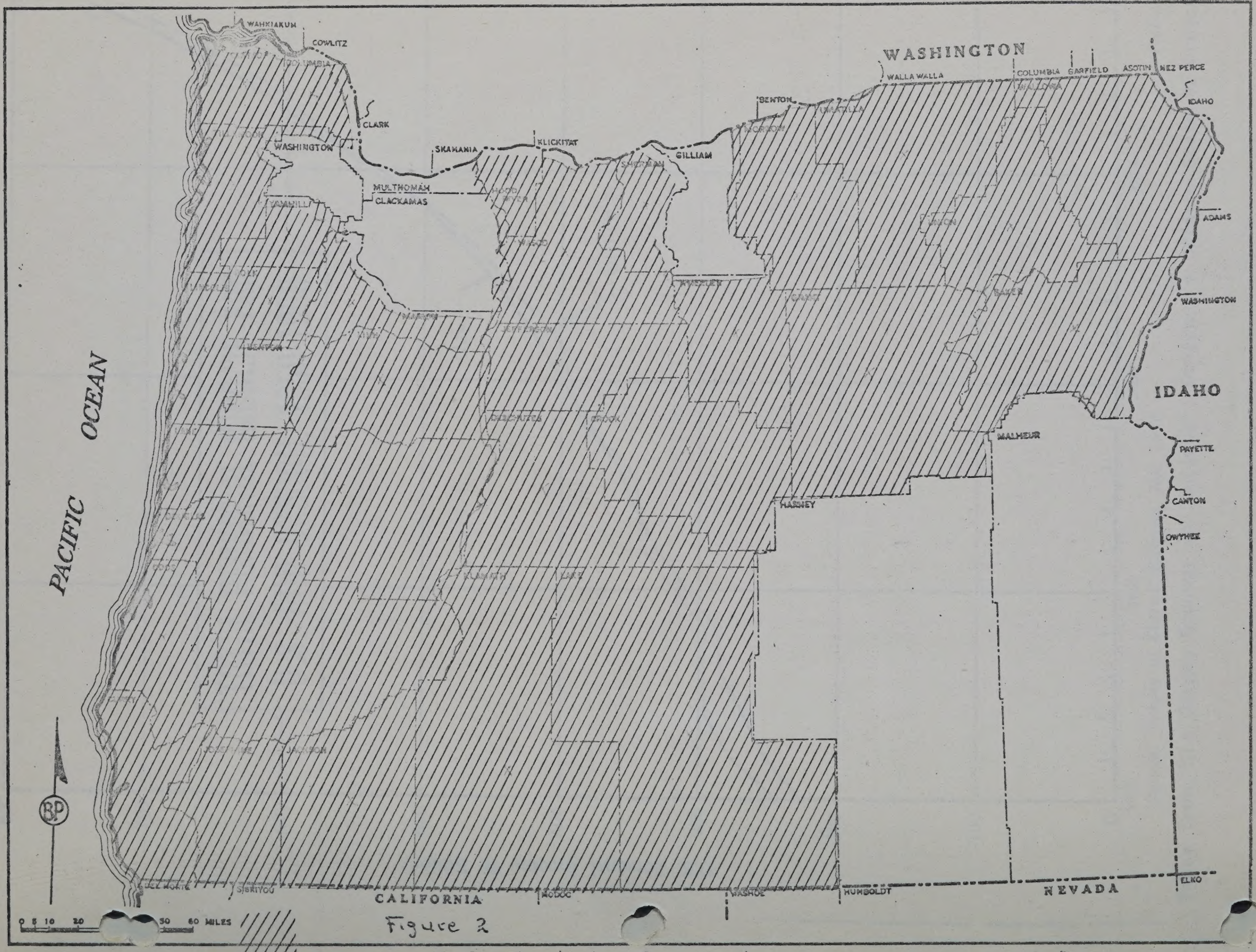
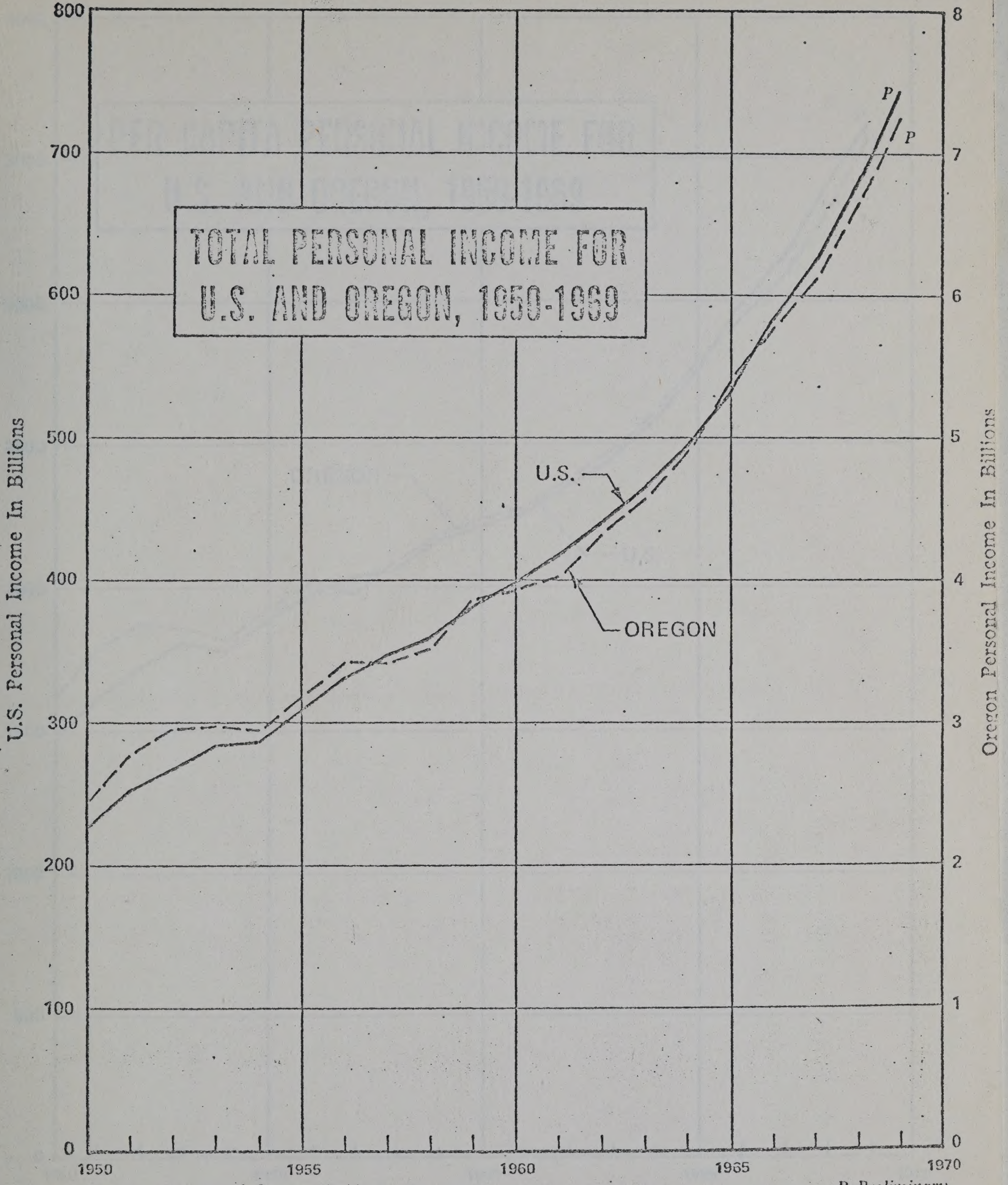

WASHINGTON
WAHKIAKUM
COWLITZ
COLUMBIA
CLARK
WASHINGTON
SKAMANIA
KLICKITAT
MULTNOMAH
CLACKAMAS
GILLIAM
SHERMAN
BENTON
WALLA WALLA
COLUMBIA
GARFIELD
ASOTIN
NEZ PERCE
IDAHO
WALLOWA
UMATILLA
MORROW
TILLAMOOK
YAMHILL
HOOD RIVER
WASCO
POLK
LINCOLN
MARION
BENTON
LINN
JEFFERSON
WHEELER
GRANT
UNION
BAKER
ADAMS
WASHINGTON
IDAHO
DESCHUTES
CROOK
LANE
MALHEUR
PAYETTE
CANTON
OWYHEE
HARNEY
DOUGLAS
COOS
KLAMATH
LAKE
CURRY
JOSEPHINE
JACKSON
PACIFIC OCEAN
DEL NORTE
SISKIYOU
CALIFORNIA
MODOC
WASHOE
HUMBOLDT
NEVADA
ELKO
0 5 10 20 30 60 MILES

Figure 2

▨ = Areas with Substantial or Persistent Unemployment as of Oct. 18, 1971

CHART 4

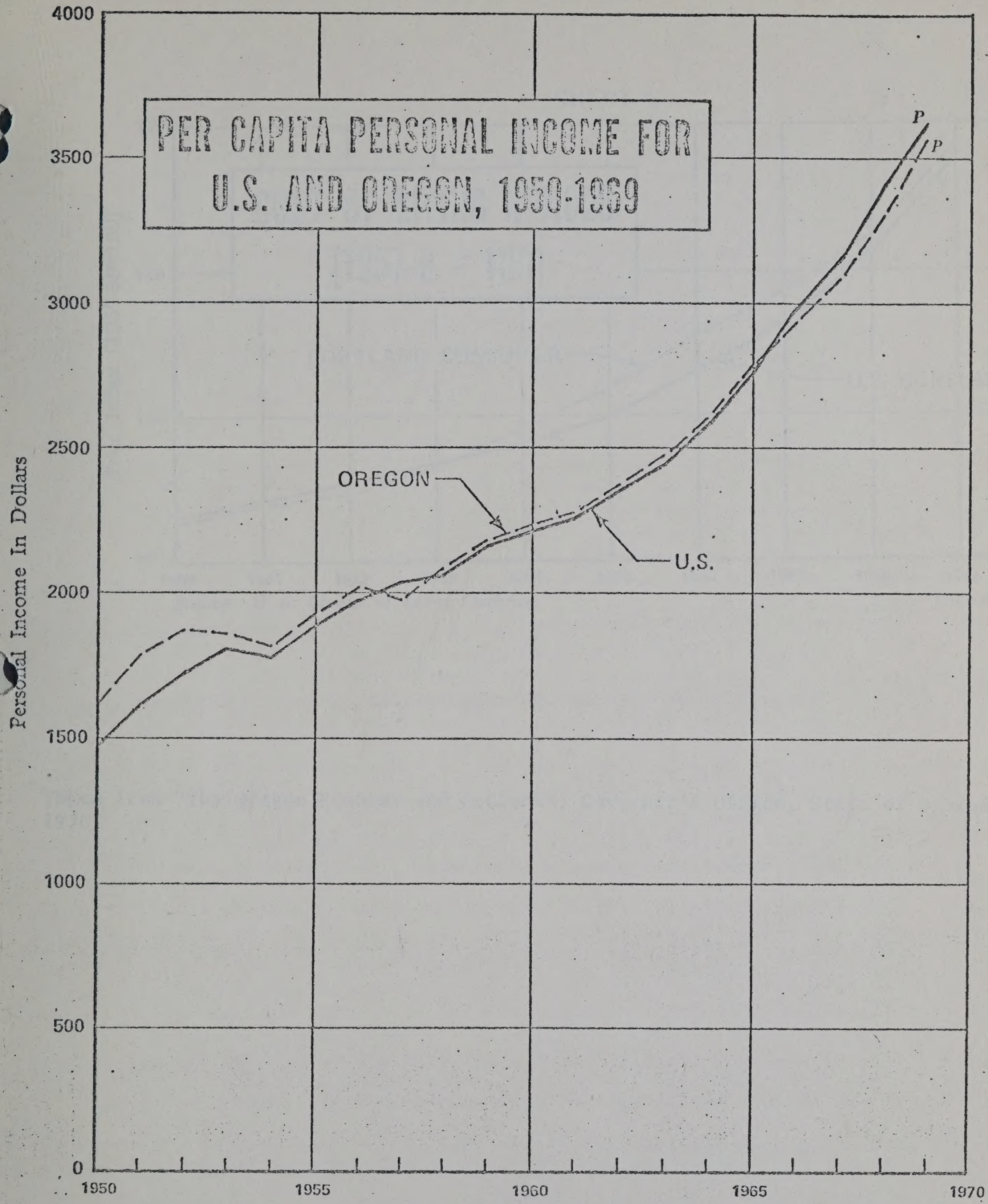

TOTAL PERSONAL INCOME FOR U.S. AND OREGON, 1950-1969

Source: Survey of Current Business, Jan. 1970

P=Preliminary

Taken from "The Oregon Economy and Outlook", Governor's Office, State of Oregon, 1970.

CHART 5

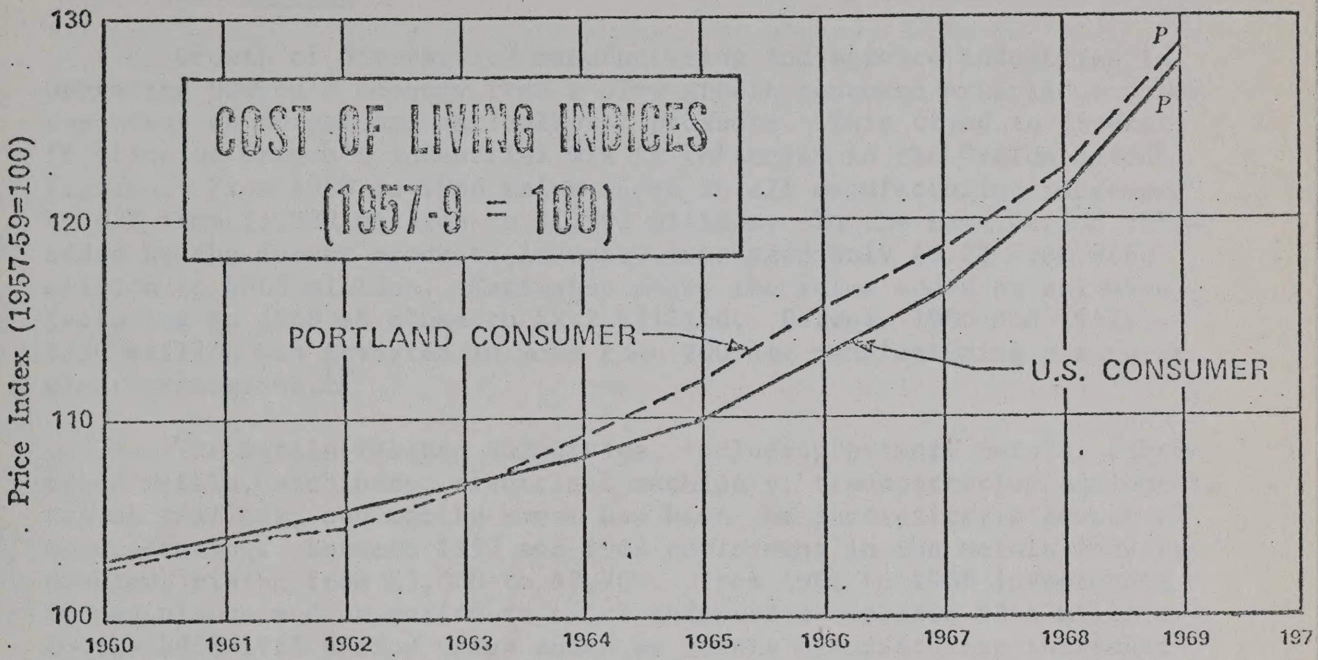


Source: Survey of Current Business, Jan. 1970

P=Preliminary

Taken from "The Oregon Economy and Outlook", Governor's Office, State of Oregon, 1970

CHART 6



Source: U. S. Bureau of Labor Statistics

P=Preliminary

Taken from "The Oregon Economy and Outlook", Governor's Office, State of Oregon, 1970.

C. Economic Overview

1. General

Growth of diversified manufacturing and service industries is upgrading Oregon's economy from a slow growth resource oriented economy dependent on forest and agricultural products. This trend in diversification of Oregon's industrial mix is reflected in the "value added" figures. From 1958 to 1966 value added to all manufacturing increased by 63% from $1,222 million to $1,992 million. In the same period value added by the forest products industry increased only 46.2% from $660 million to $965 million. Estimates place the value added by all manufacturing in 1968 at close to $2.2 billion. Between 1965 and 1967, $250 million was invested in more than 200 new manufacturing plants or plant expansions.[1]

The metals-related industries, including primary metals, fabricated metals, machinery, electrical machinery, transportation equipment, travel trailers, and mobile homes has been the pacesetter in growth of manufacturing. Between 1959 and 1969 employment in the metals industry doubled, rising from 23,000 to 47,700. From 1962 to 1969 investments in new plants and expansion in metal industries exceeded $246 million. In the 1958-1965 period value added by metals manufacturing increased 77%, reaching $379 million. If present trends continue, metals fabrication may surpass the forest industry as the state's No. 1 industry.[1] In 1969 the travel trailer and mobile home industry announced plans for 13 new plants or expansions, creating more than 1,300 new jobs.[2] Other industries showing stable growth patterns are textiles and apparels with employment of 5,500 and furniture and fixtures employing 3,900.

Except for the year 1957, Oregon's economy out performed that of the nation as a whole from 1934 to 1965 on the basis of per capita personal income. It has been slowly dropping behind since that date. The period of high economic well being coincided with the period of maximum liquidation of the privately owned old growth timber in Oregon.

2. Forest Products

Oregon is the major producer of the nation's timber supply, providing 20% of the lumber, 57% of the plywood, 38% of the particleboard, and 19% of the hardboard. Forest products, including lumber, plywood, paper, and allied products, are by far Oregon's leading industry. The wood products industry provides 47% of the manufacturing employment and 49% of manufacturing payrolls. This equals 15% of Oregon's total employment and 18% of its payrolls.

In the past decade the forest products industry has undergone marked transformation. It has changed from a large number of small mills and logging operations to a relatively few large, highly automated and integrated plants, producing a variety of wood and fiber products. Remanufacture of wood products into prefinished panels, precut construction components and laminated beams has taken up much of the slack from the reduced labor requirements of automation.

APR 1 1972

From the standpoint of capital investment, in the early 1960's, Oregon's No. 1 growth industry were the pulp and paper mills which underwent a 50% increase in capacity.[1] This included facilities for fabricating paperboard containers and packaging materials. There is potential for further growth of the pulp and pressed board industry in Oregon due to the abundance of wood waste suitable for pulping and plentiful water supplies for processing.

New construction emphasis in the 1960's was in wood processing plants other than lumber, namely veneer, plywood, particleboard and hardboard. In 1965 and 1966, 24 new plants in these categories were built or expanded at a cost of around $27.9 million.[1] The extremely high investment required for modern wood processing plants denotes a lack of fluidity in movement from one location to another. Processing plants moved out during a period timber shortage may not be replaced to provide markets for the abundant supplies of second growth timber expected to become merchantable by year 2000.

The more intensive use of wood fiber has brought into being a host of satellite industries to manufacture adhesives, bleaches, finishes, and chemicals needed for wood and pulp processing. From 1963 to 1965 there were constructed 17 new chemical plants or expansions of those in existence.[1]

3. Agriculture

Agriculture is second to wood products as Oregon's primary industry. Livestock brought the highest return of any of the crops sold in 1969 as shown in Table 5.

Table 5

Oregon 1969 Agriculture Product Market Returns[2]

Item	Production-Tons	Value of Production
Grain, forage & misc.	5,021,000	161,767,000
Seed Crops	119,655	27,311,000
Tree fruits & nuts	353,200	44,619,000
Vegetables	745,790	48,578,000
Berries	65,880	24,730,000
Total farm marketings	6,305,525	$307,005,000
Livestock		263,706,000
Total marketings		$570,711,000

Twelve percent of the nation's frozen food production and 5% of its canned food output comes from Oregon.[1] An average of 24,1000 people were employed in food processing in Oregon in 1970.[4] Consolidation of farm properties into larger units with increased merchantization has increased farm production with less labor.

APR 1 1972

4. Recreation and Tourism

Tourism is considered Oregon's third largest industry. In 1970 out-of-state visitors spent $339,465,000 in Oregon, a 154% increase over 1963 expenditures.[5] Of this, $272,761,000 was spent by passenger car tourists. Tourism is considered a net export industry inasmuch as more tourists come to Oregon to recreate than there are Oregonians going outside the state for outdoor recreation. It is considered an export industry because more out of state tourist money is spent here than that spent by Oregon tourists outside the state. The Oregon Coast is a major attraction and the many excellent state parks enhance the attraction. More than 21% of the out of state car parties took advantage of the camping facilities. Most of the tourist use is during the summer.

5. Minerals

Mineral production in Oregon in 1970 was valued at $58,199,000 providing employment for 1,300 people.[4] Table 6 shows the value of mineral production by category.

Table 6

Value of Mineral Production in Oregon 1970[4]

Mineral	Value
Sand, gravel and stone	$36,000,000
Lime	2,337,000
Pumice and cinders	1,067,000
Clay	265,000
Mercury	121,000
Nickel (1960)*$5,246,000	n.a.
Silver (1969)** 9,000	n.a.
Other	18,409,000
TOTAL	$58,199,000

*data not available after 1960 ** data not available for 1970

6. Commercial Fisheries

In 1969 Oregon's commercial fish catch was valued at about $18 million.[2] This represents a 357% increase in weight of fish harvested and a 740% increase in price over that of 1930. There has been a steady upward trend in both price and weight of fish harvested. This industry supports 560 licensed commercial fishermen as well as large numbers of people in processing plants.[2]

7. Game Fish and Wildlife

Oregon's wide variety of environmental conditions makes possible a wide variety of fish and wildlife to attract the sportsman. The fish and wildlife resource provide at least 10 million man days of sport for about 750,000 anglers and hunters. In 1969 anglers reported taking 350,000 salmon and 130,000 steelhead.[2]

APR 1 1972

Oregon has 10 species of big game animals, 15 species upland game birds and 9 mammals classed as fur bearers. Oregon's fishery resource is a major attraction to out of state sportsmen, particularly Californian. Non-comsumptive use of Oregon's wildlife, enjoyment by tourists, photographers, etc., probably returns greater economic benefits to Oregon than do expenditure by non-local hunters. This occurs because non-consumptive use may be yearlong as opposed to a relatively short hunting season. The State of Washington Department of Game found that in the State of Washington there are more non-consumptive wildlife users than there are hunters. This type of use is expected to grow faster than consumptive use.

APR 1 1972

III. Resource Use Present and Future

A. Land Resource

1. Land Use

Only 10% of Oregon's land area is under cultivation. Nearly 45% of the state is covered by forest and 41% is grazing land. Table 7 shows the major land uses in Oregon. Table 8 shows land use by county.

Table 7

Present Land Use In Oregon by Ten Use-Categories[14/]

Use-Category	Acres	Percent
Urban	294,000	0.49
Industrial	96,000	0.16
Military	64,000	0.10
Intensive Agriculture	4,011,000	6.52
Dryland Farming	2,051,000	3.33
Forests	27,572,000	44.84
Parks	192,000	0.32
Conservation	1,379,000	2.25
Grazing	25,686,000	41.50
Non Productive Land	298,000	0.49

Total Land Area 61,642,000

2. Land Ownership

The major area of Oregon land, 56%, is publicly owned. The Federal government owns 50.2%. The Bureau of Land Management is responsible for the largest acreage, as shown in Table 9. Deschutes and Malheur Counties have 74.1% of their land in Federal ownership; Harney County, 72.8%

Major state land owners are the State Land Board with 809,933 acres, Board of Forestry with 653,190 acres, Highway Commission with 221,644 acres, and Game Commission with 58,123 acres.

3. Land Use Trends

Although some forest land is being converted to recreation use, only in the Willamette Basin is any major change expected in land use within the next decade. Here a substantial acreage of farm land will be converted to urban development, manufacturing sites, and new roads and highways. A loss of 164,000 acres to these uses is anticipated by

TABLE 8

LAND USE IN OREGON COUNTIES[59]

Percentage of Total Land Area in Ten Use-Categories

County	Urban	Industrial	Military	Intensive Agriculture	Dryland Farming	Forests	Parks	Conservation	Grazing	Non-Productive Land	Total Land Area
Baker	.23			9.70		38.61		.66	49.38	1.42	100.00
Benton	.57			34.82		57.65		2.74	4.22		100.00
Clackamas	1.76			19.50		72.22		.20	5.79	.53	100.00
Clatsop	.77		.29	2.12		90.85	1.54		3.18	1.25	100.00
Columbia	1.17		.12	12.73		77.10		4.67	3.04	1.17	100.00
Coos	.82			4.67		87.23	.29		6.99		100.00
Crook	.05			3.46		26.37			70.12		100.00
Curry	.14					81.19	1.29	5.41	3.37	8.60	100.00
Deschutes	.10			3.70		52.74		3.48	38.58	.50	100.00
Douglas	.27			4.38		86.35	.02		8.71		100.00
Gilliam					38.02				61.98		100.00
Grant				1.99		66.09	.07	1.28	30.27	.32	100.00
Harney	.02			1.24	.08	6.55		2.39	88.97		100.00
Hood River	1.20			8.83		80.09	.15	1.80	5.39	2.54	100.00
Jackson	.29		.08	7.86		87.85		.13	3.79		100.00
Jefferson	.13			6.30	1.17	33.33	.60	3.24	54.88	.35	100.00
Josephine	.18			3.00		82.38		.05	6.18	8.21	100.00
Klamath	.35			7.34		70.39	3.68	2.12	15.48	.64	100.00
Lake	.01			2.52		23.47		7.74	66.26		100.00
Lane	1.78			8.85		81.29		5.08	2.58	.16	100.00
Lincoln				1.13		91.37			7.50		100.00
Linn	.33			25.02		65.86		5.62	2.71	.46	100.00
Malheur	.07			4.95	.12	.65			94.21		100.00
Marion	4.13			47.46		42.71	1.25	1.32	2.25	.88	100.00
Morrow		7.16	4.02	.99	30.88	17.87			39.08		100.00
Multnomah	25.60	.48		20.51		50.08		3.02		.31	100.00
Polk				41.68		51.58			6.74		100.00
Sherman	.19				60.76				39.05		100.00
Tillamook	.48		.20	4.91		85.95	1.02		7.44		100.00
Umatilla	.28		.23	2.65	32.84	34.24	.02	.35	29.11		100.00
Union	.53		.08	2.15	9.70	65.87		4.11	17.56		100.00
Wallowa	.07			2.22	1.90	52.56		7.60	35.65		100.00
Wasco	.32			3.96	10.17	31.58		.92	53.05		100.00
Washington	3.19			46.28		50.53					100.00
Wheeler				.40		30.51			69.09		100.00
Yamhill	1.70			45.16		52.71				.43	100.00
State	.49	.16	.10	6.52	3.33	44.84	.32	2.25	41.50	.49	100.00

TABLE 9

FEDERAL LAND OWNERSHIP IN OREGON BY AGENCY

IN RANK ORDER OF SIZE OF HOLDINGS

59)

	Acres
Bureau of Land Management	15,937,354
Forest Service	15,001,833
Fish and Wildlife Service	444,024
Bureau of Reclamation	173,447
National Park Service	160,877
Navy	98,646
Corps of Engineers	59,473
Army	19,362
Agricultural Research Service	14,594
Bonneville Power Administration	1,511
Bureau of Indian Affairs	1,219
Federal Aviation Agency	971
Maritime Administration	917
Air Force	802
Coast Guard	686
Veterans Administration	474
Federal Communications Commission	109
Bureau of Mines	47
Post Office Department	15
General Services Administration	7
Public Health Service	1
Total of 21 Agencies	31,916,368 (a)

(a) Does not add to total due to rounding.

year 2020.[15] There will be increasing demand for recreation use and aesthetic enjoyment of BLM managed lands and resources. Little demand is anticipated for changes of use of the BLM managed lands or their need for local public use, other than watershed management, open space, and aesthetics. Public interest in ecology provides constraints on harvesting the resources from the public lands.

Timber Resource

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

B. Merchantable Wood Products

1. Economic Importance

a. Production and Trade

Lumber is Oregon's major forest product. Production of Douglas fir lumber peaked in 1952 with production of 7,010 mm bd. ft. Pine production peaked in 1968 with output of 1,584 mm bd. ft. Both lumber production and number of sawmills have been declining in western Oregon since 1952. Between 1956 and 1964, 185 sawmills in western Oregon closed down, a 38% decrease in numbers. Although lumber production increased 26% in eastern Oregon between 1950 and 1966, the number of sawmills dropped from 70 to 30. With the subsequent National economic upturn, the number of eastern Oregon sawmills increased to 50.

In 1969 the veneer and plywood industry (SIC 2432)* was the largest single employer in the wood products industry with 30,312 workers compared to 24,140 in sawmills and planing mills. For many years Oregon and Washington supplied all the Nations plywood demands. In recent years there has been spectacular growth of the plywood industry in Idaho, Montana, California, and the southern states to compete with Oregon's output.

Growth of Oregon's pulp industry has occurred mostly since World War II. Oregon produces less than half the amount of wood pulp produced in Washington State which ranks second in the Nation in wood pulp production. Pulp and paper mills have a capital investment of $372,226,609 in Oregon on which they pay $10,017,741 in state and local taxes. In 1970 they had 6,199 employees with a payroll of $69,988,393. They consumed 4,305,486 tons of wood worth $63,856,352. Total 1970 value of products shipped was $388,757,058. The economy also benefitted from purchase of goods and services other than wood and labor for paper production in the amount of $139,215,001.

By 1968 Oregon had become the leading state in particleboard production, providing 38% of the national total. Oregon's hardboard production equalled 19% of the Nation's output as well as 5% of the Nation's output of insulation board. Pulp and board mills in Oregon have a combined capacity of 13,415 tons per day. About 54% of the capacity is in pulp mills and the balance in pressed board mills. In addition to wood waste about 80 mm bd. ft. of round wood goes into pulp production. In 1965 only about 51% of the installed particleboard capacity was used.

In 1968 there were 48 shake and shingle mills in Oregon using 72.5 mm bd. ft. of logs. These mills are in western Oregon with concentrations in Lane and Tillamook Counties.[3]

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*Standard Industrial Classification Code.

The downturn in the lumber market in 1969 and 1970 had serious impact on the timber industry. Employment in lumber and wood products in 1970 was down 4185 from 1969, a 5.9% drop. The 66,766 workers in this industry equalled 11.8% of the total covered employment in the state. This was the first time since 1961 that total employment was lower than the previous year. Lumber and wood products payroll came to $572,193,469 compared to a state total of $4,057,385,418, being 14.1% of the total.

In the first quarter of 1971 lumber output in western Oregon and Washington was up 11.4% with prices consistantly higher than those in 1969-70. Production of plywood set a new high of 4 billion square feet in response to the price increase. Competition for stumpage brought a rise in stumpage prices in western Oregon in second quarter 1971. West side Douglas fir stumpage on National Forest lands was up 4.1% to $45.30 per mm bd. ft. and Ponderosa and Jeffrey pine up 37.9% to $16.00 per mm bd. ft. Second quarter lumber production increased 5.3% over the previous quarter.

Community economic benefits from wood processing are proportional to the degree of utilization within the community. The economic multiplier is higher in the Portland area than in Douglas County due to the higher intensity of use and labor input in Portland, not only from building construction but also from its furniture factories, window and door plants, prefabricated building factories, and vacation trailer and camper factories. By the same token the economic multiplier is higher on a state level than the county level and yet still higher on a national level.

b. Relationship to National Economy and World Markets

Value of the dollar in world trade is in a precarious position because for too long this country has imported more than it exported, resulting in a deficit balance of trade payments. In view of this, it is surprising to find that the United States is the world's leading importer of timber products. Our exports of wood products are far below the volume of imports. In 1969 value of imported timber products was more than $2.7 billion compared to wood exports of slightly over $1.5 billion.[24/] These wood imports were about 8% of the value of all U. S. imports while our wood exports were only 4% of all our exports on a value basis. Imports of wood products have nearly doubled since 1950. Exports of wood have increased at an even faster rate but much of this increase was in export of logs, a relatively light labor intensive phase of the industry. Total log exports increased from only 10 million cubic feet in 1950 to 430 million cubic feet in 1970.[24/]

Oregon accounts for nearly 10% of the Nation's wood product foreign export sales.[24/] Oregon's log exports reached an all time high in 1970 for a total of 637 million bd. ft., a 13.4% increase over 1969 exports.[12/]

Such exports were 187,700 M bd. ft. in 1961. Value of Oregon's 1970 log exports was $87,522,485. Returns for Douglas fir logs averaged $119.54 per M, Port Orford Cedar $329.88, and other softwoods $123.80 per M bd. ft. Man hours of labor required for exporting logs is practically the same as that required for sawing green lumber in the large size mills.13/ However total initial processing of lumber provides nearly three times the employment than the 3.01 man hours per M bd. ft. required for log exporting.13/

A major share of the west coast wood chip exports also comes from Oregon. Oregon's chip exports increased from 91,646 short tons in 1965 to 1,605,062 short tons in 1970, an increase of 17½ times in six years. The 1970 Oregon shipments were 76% of the total such exports from the west coast. The rising trend continued the first quarter of 1971 with west coast chip exports 10.3% above the last quarter of 1970. In this period Oregon's chip exports were down to 69.4% of the total. In 1971 Alaska began shipment of chips to Japan. Value of Oregon's wood products exports in 1970 is shown in Table 10.

Table 10

Value of Oregon's Wood Products Exports in 1970 12/

Item	Quantity	$ Value	$ Return
Logs	637,023 mbf	137.29 mbf	87,522,485
Wood Chips	1,605,062 Short Tons	19.31 per Short Ton	30,993,747
Green Dimension Lumber	273,748 mbf	74.13 mbf	20,292,939
Plywood	79,359 m sq. ft.	80.15 m sq. ft.	6,360,624
			145,169,795

c. Timber Supplies

Availability of private old growth timber stumpage is declining due to past heavy cutting. Shortage of timber stumpage plus conflicting demands for use of forest lands for recreation, wildlife, and aesthetic considerations has focused national attention on timber harvest policies and programs of the Forest Service and BLM.

The potential for increasing future timber yields is indicated by the fact that in the Douglas fir region, 60% of the forest lands are well stocked, 26% are medium stocked, and 14% are poorly stocked.17/

In western Oregon about 71% of the sawtimber is Douglas fir and 29% a mixture of true fir, hemlock, spruce, and cedars. For timber outside the National Forests, net growth rate averages 90 cubic feet or 540 board feet Scribner per acre.17/ Ownership of commercial forest lands in Oregon is shown in Table 13.

Recreation and other multiple resource use demands are competing for forest land use, continually reducing the acreage available for timber production.

The overbuilt capacity of milling facilities, the increasing national demand for wood products, and the depletion of timber supplies has set up a trend of increasing stumpage prices. The Pacific Northwest Forest and Range Experiment Station has projected stumpage prices to the next century as shown in Table 11. These are constant prices with the affect of inflation removed to demonstrate the effect of market and other factors on stumpage prices.

Table 11

All Species Conifer Timber Average Stumpage Price Projections for the Douglas Fir Region[17]

Decade	Average Stumpage Price
1967-76	$34.31
1977-86	42.23
1987-96	50.16
After 1996	50.16

It is anticipated that substitutes for wood in the construction industry will limit the price of wood products and timber stumpage.

Net annual growth of timber in Oregon is shown in Table 12.

Table 12

Net Annual Growth of Sawtimber & Growing Stock on Commercial Forest Land In Oregon[18]

	Sawtimber		Growing Stock	
Area	Total mm bd.ft.Internat'l	Per Acre bd.ft.Internat'l	Total million cubic ft.	Per Acre cubic ft.
estern Oregon	2700	196	595	42
astern Oregon	955	84	279	25
OTAL	3655		874	

TABLE 13

AREA OF COMMERCIAL FOREST LAND IN OREGON BY OWNERSHIP (1000 ACRES) 16/

Area	All Ownerships	FEDERAL					State	Municipal & County
		Total	USFS	BLM	INDIAN	MISC.		
West. Oregon	15,082	7,320	5,085	2,227	8	-	731	137
East. Oregon	11,531	8,059	7,460	250	346	3	38	17
TOTAL	26,613	15,379	12,545	2,477	354	3	769	154

	FOREST INDUSTRY				Farmer	Private Miscellaneous
	Total	Pulp & Paper	Lumber	Other		
West. Oregon	3,532	1,042	2,199	291	1,677	1,685
East. Oregon	1,477	74	1,403	-	1,652	288
TOTAL	5,009	1,116	3,602	291	3,329	1,973

16/ "Timber Resource Statistics for Pacific Northwest" Pacific Northwest Forest & Range Experiment Station, PNW-9, 1965

Merchantable old growth timber from private industrial lands in western Oregon will be exhausted in 30 to 40 years if present levels of private cutting and timber management are continued.[17]

d. Milling Capacity

The economy of an area is related not only to the amount of timber stumpage available but also to the efficiency of the mills in processing the wood. Because of competitive materials in the building industry, the price of lumber and plywood must be kept at a reasonable level in order to maintain its place on the market. Thus efficiency of mill operation to insure high production at minimal cost plus maximum utilization of the wood resources is the key to survival in the wood products industry.

The current unused capacity of many sawmills in Oregon indicates that they may not be operating at maximum efficiency. Table 14 shows that mills in western Oregon in 1968 operated at a range of only 12.6 to 48% of capacity.[3] Mills in eastern Oregon used from 19.6 to 65.3% of their capacity. Average days mill operation varied from 94 in the Blue Mt. area to a maximum of 252 in southwest Oregon as compared to 360 days operation in some of the pulp and particleboard mills.[3]

Many factors limit accelerated mill operations. One is a shortage of stumpage for some mills. Another is market limitations. The data in Table 13 suggests there is an excess of sawmilling capacity over and above that needed to supply the market. A reduction in the number of sawmills would permit more intensive use of those remaining at a decreased cost of operation and a more competitively priced product. Fewer mills in operation might also reduce the amount of cross-hauling of logs which is an inefficient and expensive means of acquiring timber and adds to the cost of the final product. In western Oregon mills in Washington and Lincoln Counties show the least utilization of capacity. In eastern Oregon capacity of mills in Morrow County are the least utilized as shown in Table 14.

e. Wood Fiber Utilization

Tradtionally trees have been valued for the amount of lumber, plywood, or pulpwood they will produce. Actually only about 40% of a log is recovered if converted to lumber or 45% recovered if used for plywood.[3] Although many of the larger, integrated mills have made use of their sawmill and plywood waste for a number of years, until recently the slabs, edgings, sawdust, and bark from most of the smaller mills was burned as waste. The slabs, edgings, and peeler cores are now chipped and used in pulp mills or exported to Japan. 72% of the sawdust is now used of which 28% goes for pulp.[3] Sawdust and bark is in demand for fuel.

Table 14

Sawmill Log Consumption and Capacity - Thousand Board Feet, Scribner Scale 1968[3/]

				Class A Mills[1]			Class B Mills[1]			Class C Mills[1]			Class D Mills[1]				
County	Total Log Consumption	Total Sawmill Consumption	% Logs to Sawmills	No. Mills	Daily* Capacity	Annual** Capacity	No. Mills	Daily* Capacity	Annual** Capacity	No. Mills	Daily* Capacity	Annual** Capacity	No. Mills	Daily* Capacity	Annual** Capacity	Total Annual Capacity	Percent Utilization of Mill Capacity
SALEM DISTRICT																	
Coast Resource Area																	
Benton	226,629	197,963	87	1	180	162,000	4	405	364,500	4	225	202,500	2	63	56,700	785,700	25.2
Clatsop	141,655	71,297	50	-	---	---	2	195	175,500	-	---	---	1	15	13,500	189,000	37.7
Columbia	240,335	220,945	92	4	715	643,500	1	80	72,000	2	103	92,700	3	50	45,000	853,200	25.9
Lincoln	175,804	93,542	53	2	310	279,000	2	180	162,000	2	135	121,500	4	33	29,700	592,200	15.8
Polk	265,659	131,222	49	2	265	238,500	2	195	175,500	2	113	101,700	2	22	19,800	535,500	24.5
Tillamook	177,100	124,588	70	2	275	247,500	1	80	72,000	1	40	36,000	7	61	54,900	410,400	30.4
Washington	71,523	45,773	64	-	---	---	2	170	153,000	2	115	103,500	10	120	108,000	364,500	12.6
Yamhill	129,093	76,160	59	-	---	---	1	100	90,000	3	205	184,500	4	63	56,700	331,200	23.0
Subtotal	1,427,798	961,490	67	11	1,745	1,570,500	15	1,405	1,264,500	16	936	842,400	33	427	384,300	4,061,700	23.7
Cascade Resource Area																	
Clackamas	363,419	285,738	79	3	650	585,000	1	100	90,000	7	352	316,800	14	205	184,500	1,176,300	24.3
Linn	592,001	268,001	45	3	605	544,500	3	285	256,500	4	250	225,000	7	95	85,500	1,111,500	24.1
Marion	159,733	93,260	58	1	162	145,800	1	90	81,000	3	140	126,000	4	13	11,700	364,500	25.6
Multnomah	218,013	97,810	45	-	---	---	3	310	279,000	1	40	36,000	2	62	55,800	370,800	26.4
Subtotal	1,333,166	744,809	56	7	1,417	1,275,300	8	785	706,500	15	782	703,800	27	375	337,500	3,023,100	24.6
Dist. Tot.	2,760,964	1,706,299	62	18	3,162	2,845,800	23	2,190	1,971,000	31	1,718	1,546,200	60	802	721,800	7,084,800	24.1
EUGENE DISTRICT																	
Lane	1,841,230	944,893	51	10	1,982	1,783,800	12	1,130	1,017,000	10	598	538,200	9	203	182,700	3,521,700	26.8
ROSEBURG DISTRICT																	
Douglas	1,135,218	532,340	47	7	1,390	1,251,000	9	825	742,500	5	250	225,000	7	138	124,200	2,342,700	22.7
COOS BAY DISTRICT																	
Coos	816,414	448,407	55	4	860	774,000	5	482	433,800	2	90	81,000	3	55	49,500	1,338,300	33.5
Curry	250,502	144,117	58	2	310	279,000	1	85	76,500	-	---		5	66	59,400	414,900	34.7
Subtotal	1,066,916	592,524	56	6	1,170	1,053,000	6	567	510,300	2	90	81,000	8	121	108,900	1,753,200	33.8
MEDFORD DISTRICT																	
Jackson	745,692	360,668	48	3	540	486,000	7	640	576,000	1	50	45,000	2	9	8,100	1,115,100	32.3
Josephine	229,114	165,072	72	4	580	522,000	1	110	99,000	1	70	63,000	3	75	67,500	751,500	22.0
Klamath	498,098	430,245	86	2	555	499,500	1	100	90,000	5	320	288,000	1	20	18,000	895,500	48.0
Subtotal	1,472,904	955,985	65	9	1,675	1,507,500	9	850	765,000	7	440	396,000	6	104	93,600	2,762,100	34.6
W.Ore. Total	8,277,232	4,732,041	57	50	9,379	8,441,100	59	5,562	5,005,800	55	3,096	2,786,400	90	1,368	1,231,200	17,464,500	27.1

Sawmill Log Consumption and Capacity - Thousand Board Feet, Scribner Scale 1968[3/]

County	Total Log Consumption	Total Sawmill Consumption	% Logs to Sawmills	Class A Mills[1] No. Mills	Class A Mills[1] Daily* Capacity	Class A Mills[1] Annual** Capacity	Class B Mills[1] No. Mills	Class B Mills[1] Daily* Capacity	Class B Mills[1] Annual** Capacity	Class C Mills[1] No. Mills	Class C Mills[1] Daily* Capacity	Class C Mills[1] Annual** Capacity	Class D Mills[1] No. Mills	Class D Mills[1] Daily* Capacity	Class D Mills[1] Annual** Capacity	Total Annual Capacity	Percent Utilization of Mill Capacity
BAKER DISTRICT																	
Baker	102,020	66,020	64.7	-	---	---	1	80	72,000	2	120	108,000	1	3	2,700	182,700	36.1
Umatilla	109,612	109,612	100	1	120	108,000	1	110	99,000	2	140	126,000	1	10	9,000	342,000	32.1
Union	212,088	144,088	67.9	2	300	270,000	-	---	---	1	40	36,000	4	28	25,200	331,200	43.5
Wallowa	36,242	36,242	100	-	---	---	-	---	---	1	78	70,200	2	13	11,700	81,900	44.3
Subtotal	459,962	355,962	77.4	3	420	378,000	2	190	171,000	6	378	340,200	8	54	48,600	937,800	38.0
PRINEVILLE DISTRICT																	
Crook	129,588	129,588	100	1	150	135,000	-	---	---	3	190	171,000	1	30	27,000	333,000	38.9
Deschutes	130,472	130,472	100	1	400	360,000	-	---	---	1	70	63,000	1	15	13,500	436,500	30.0
Gilliam	---	---	--	-	---	---	-			-	---	---	-	--	---	---	----
Jefferson	70,000	40,000	57.1	-	---	---	1	90	70,200	-	---	---	-	--	---	70,200	57.0
Morrow	22,227	22,227	100	-	---	---	1	100	72,900	1	55	40,755	-	--	---	113,655	19.6
Wasco	73,387	73,387	100	-	---	---	2	320	238,080	-	---	---	-	--	---	238,080	30.8
Wheeler	35,000	35,000	100	1	135	99,225	-	---	---	1	50	39,000	-	--	---	138,225	25.3
Subtotal	460,674	430,674	93.5	3	685	594,225	3	510	381,080	6	365	313,755	2	45	40,500	1,329,660	32.4
VALE DISTRICT																	
Malheur	0			-	---	---	-	---	---	-			-	--	---	---	----
BURNS DISTRICT																	
Grant	119,887	103,887	86.7	-	---	---	1	80	72,000	2	137	123,300	2	25	22,500	217,800	47.7
Harney	132,160	96,000	72.6	1	200	147,000	-	---	---	-	---	---	-	--	---	147,000	65.3
Subtotal	252,047	199,887	79.3	1	200	147,000	1	80	72,000	2	137	123,300	2	25	22,500	364,800	54.8
LAKEVIEW DISTRICT																	
Lake	60,960	60,960	100	-	---	---	2	160	144,000	1	70	63,000	-	--	---	207,000	29.4
E. Ore.Total	1,233,643	1,047,483	84.9	7	1,305	1,119,225	8	940	768,080	15	950	840,255	12	124	111,600	2,839,260	36.9

1 - Class D Mills less than 40,000 bd. ft. per day; Class C, 40-79,000 bd. ft. per day; Class B, 80-119,000 bd. ft.; and Class A 120,000 and up bd. ft. per day.
* Based on one 8 hr. shift.
**Based on three shifts per day.

horticultural uses, mulching, and landscaping. Bark residues from sawmills amounted to 2.0 million tons in 1968, almost half of which was used.[3] Bark residues from veneer and plywood mills amounted to 1.2 million tons, 64% of which was used. Market for bark waste is proportional to its distance from market. Low selling price and high transportation costs rules out sale of the bark waste by some mills where it continues to be burned or used for land fill.

The phase-out of the wigwam burner for wood waste disposal indicates the trend in wood fiber utilization. State of Oregon air quality control standards are helping to eliminate the wood waste burners. This is forcing some of the mill operators to develop markets for these "waste" materials simply as a means of disposal. Even though the retail price of bulk bark in Portland is $16 to $20 per unit delivered, the average price paid for raw bark at the mill is $1 per unit.[22]

Table 15 shows how the improving market for wood waste has increased the conversion value of a log. A Douglas fir log of suitable size can be converted into 1250 board feet of lumber or 2400 square feet 3/8" plywood, or 2 cords of pulpwood per 100 board feet stumpage. The plywood and pulp industries are much more labor intensive balancing out the higher return from the end product. It is interesting to note that the value of wood and bark "waste" recovered and sold nearly equals stumpage price of some of the lower value species of timber.

Table 15

Average Conversion Value of a 1000 b.f. Douglas Fir Log

Lumber Board Feet	Lumber[1] Value	Sawdust Tons	Sawdust Value[2]	Bark Tons	Bark[3] Value	Chips Tons	Chips[4] Value	Total Value
1250	$104.46	.297	$2.17	.285	$0.28	.796	$5.77	$112.68

3/8" Plywood Square Feet	Plywood[1] Value	Sander Dust-Tons	Sander[2] Dust-Value	Bark Tons	Bark[3] Value	Wood Waste Tons	Wood Waste Value[4]	Total Value
2400	$207.50	.045	$0.33	.285	$0.28	1.04	$12.76	$220.87

Cords Pulpwood	Pulp Wood Value[24]	Bark-Tons	Bark-Value	Wood Pulp Value[5]
2	$50.00	.285	$0.28	195.30

[1] Based on an average lumber value of $83.57 per M bd. ft. and plywood value of $86.46/msq[11]

[2] Based on an average price at mill of $8.75 per unit or $7.29 per ton from unpublish surv.

[3] Based on a value of $1.00 per unit at mill[22]

[4] Based on a value of $12.27 per unit at mill from unpublished BLM study[27]

[5] Based on a pulp value of $105 per ton and 93% recovery of wood fibers[25]

Table 15 shows Oregon's 1968 production of wood waste had a value of over $122 million and a bark waste value of $1.5 million. Wood waste recovered from BLM logs had a value of over $22 million. This high return from BLM lands apparently resulted from a high backlog of BLM timber held by private industry which was processed in 1968. Table 16 indicates an average return from wood waste from BLM timber of around $16 million per year.

2. Relationship of the BLM Timber Resource to the Economy

a. Timber Sales

Surveys indicate that there is 50.2 billion bd. ft. mature merchantable timber on BLM managed lands in western Oregon.[27] At $50 per mm bd. ft. stumpage value this equals an investment of $2,510,000,000. This amount drawing 6% interest in a bank would yield $150,600,000 per year. However the forest lands produce important public values in addition to what they bring in from timber sales, such as watershed values, recreation, wildlife, and open space.

Table 17 shows the value of timber sold from BLM lands between 1960 and 1970. The return from BLM timber more than doubled. Starting in 1963 a greatly accelerated harvest was required to salvage blow down from the Columbus Day hurricane. The Oxbow Fire of 1967 also required increased timber sales to salvage the material in the burned area. The 787,000 mm bd. ft. overcut in this decade reduced the timber base on which the sustained yield allowable cut was predicated.

Table 17

BLM Timber Sales in Oregon 1960-1970

Fiscal Year	Allowable Cut M bd. ft.	Volume Sold M bd. ft.	Value
1960	918,000	1,050,560	$30,004,462
1961	981,000	1,037,266	25,825,977
1962	934,000	959,353	28,537,538
1963	1,127,000	1,507,545	36,552,253
1964	1,127,000	1,534,756	41,559,234
1965	1,150,900	1,239,953	42,273,158
1966	1,150,900	1,245,450	44,753,553
1967	1,150,900	1,373,567	51,012,801
1968	1,150,900	1,371,447	51,974,347
1969	1,150,900	1,102,506	79,846,175
1970	1,150,900	1,687,380	82,647,011

In 1970 average stumpage price for BLM westside timber averaged nearly $50 per thousand. Price for eastside timber averaged over $25.00.

Table 16

Value of Wood Waste Production In Oregon By County 1968 M bd. ft. Scribner

County	Total Log Use - Mbf.	Sawmill Log Use[1]	Tons Wood Residue[1] Recovered	Residue Value* Dollars	Tons Bark Residue[1] Recovered	Bark** Value Dollars	Total Value Sawmill Waste	Log Use For Veneer & Plywood-Mbf	Tons Wood Residue[1] Recovered	Residue Value Dollars	Tons Bark Residue[1] Recovered	Bark** Value Dollars	Total Value Plywood Waste	Total Value Sawmill & Plywood Waste	Value Creditable BLM Logs
SALEM DISTRICT															
Coast Resource Area															
Benton	226,629	197,963	202,136	$2,480,209	25,375	$21,145	2,501,354	28,591	15,816	194,062	550	$ 458	$194,520	$2,695,874	$1,248,190
Clatsop	161,655	71,297	112,990	1,386,387	1,134	945	1,387,332	46,869	36,446	447,192	3,780	3,150	450,342	1,837,674	0
Columbia	240,335	220,945	362,521	4,448,133	65,005	54,169	4,502,302	19,390	15,085	185,093	1,565	1,304	186,397	4,688,699	42,198
Lincoln	175,804	93,542	165,268	2,027,838	7,575	6,312	2,034,150	73,081	49,322	605,181	14,154	11,795	616,976	2,651,126	121,952
Polk	265,659	131,222	156,549	1,920,856	36,006	30,004	1,950,860	127,787	123,973	1,521,149	27,268	22,722	1,543,871	3,494,731	1,156,756
Tillamook	177,100	124,588	138,831	1,703,456	5,173	4,311	1,707,767	44,500	46,285	567,917	7,872	6,560	574,477	2,282,244	456,449
Washington	71,523	45,773	48,372	593,524	1,569	1,307	594,831	22,250	23,844	292,566	4,056	3,380	295,946	890,777	67,699
Yamhill	129,093	76,160	176,651	2,167,508	15,687	13,072	2,180,580	47,443	88,857	1,090,275	31,808	26,506	1,116,781	3,297,361	2,044,364
Subtotal	1,427,798	961,490	1,363,318	16,727,912	157,524	131,265	16,859,177	409,911	399,628	4,903,436	91,053	75,874	4,979,310	21,838,487	5,137;608
Cascade Resource Area															
Clackamas	363,419	285,738	452,665	5,554,200	59,512	49,591	5,603,791	32,573	25,343	310,959	2,628	2,190	313,149	5,916,940	680,448
Linn	592,001	268,001	315,006	3,865,124	42,416	35,345	3,900,469	315,975	333,251	4,088,990	75,720	63,097	4,152,087	8,052,556	789,150
Marion	159,733	93,260	136,082	1,669,726	5,339	4,449	1,674,175	56,275	43,807	537,512	4,543	3,786	541,298	2,215,473	62,033
Multnomah	218,013	97,810	101,372	1,243,834	16,088	13,406	1,257,240	113,000	106,378	1,305,258	32,504	27,086	1,332,344	2,589,584	0
Subtotal	1,333,166	744,809	1,005,125	12,332,884	123,355	102,792	12,435,676	517,823	508,779	6,242,718	115,395	96,159	6,338,877	18,774,553	1,531,631
Dist. Total	2,760,964	1,706,299	2,368,443	29,060,796	280,879	234,056	29,294,852	927,734	908,407	11,146,154	206,448	172,033	11,318,187	40,613,039	6,669,239
EUGENE DISTRICT															
Lane	1,841,230	444,893	1,264,581	15,516,409	230,399	191,991	15,708,400	881,730	1,135,104	13,927,726	257,390	214,483	14,142,209	29,850,609	3,283,567
ROSEBURG DISTRICT															
Douglas	1,135,218	532,340	661,275	8,113,844	113,574	94,641	8,208,485	591,560	583,968	7,165,287	102,992	85,823	7,251,110	15,459,595	4,606,959
COOS BAY DISTRICT															
Coos	816,414	448,407	574,257	7,046,133	94,267	78,553	7,124,686	368,006	401,790	4,929,963	72,640	60,531	4,990,494	12,115,180	4,264,543
Curry	250,502	144,117	140,451	1,723,334	1,596	1,330	1,724,664	106,385	164,100	2,013,507	18,033	15,027	2,028,534	3,753,198	364,060
Subtotal	1,066,916	592,524	714,708	8,769,467	95,863	79,883	8,849,350	474,391	565,890	6,943,470	90,673	75,558	7,019,028	15,868,378	4,628,603
MEDFORD DISTRICT															
Jackson	745,692	360,668	283,468	2,644,756	52,494	43,743	2,688,499	385,024	404,700	3,775,851	65,326	54,436	3,830,287	6,518,786	1,564,509
Josephine	229,114	165,072	171,534	1,600,413	57	47	1,600,459	64,042	72,021	671,956	11,352	9,460	681,416	2,281,875	1,202,549
Klamath	498,098	430,245	283,170	2,641,976	98,453	82,041	2,724,017	67,853	41,808	390,069	9,310	7,758	397,827	3,121,844	15,921
Subtotal	1,472,904	955,985	738,172	6,887,145	151,004	125,832	7,012,977	516,919	518,529	4,837,876	85,988	71,654	4,909,530	11,922,507	2,782,979
W.Ore.Total	8,162,553	4,732,041	5,747,179	68,347,661	871,719	726,403	69,074,064	3,392,334	3,711,898	44,020,513	743,491	619,551	44,640,064	113,714,128	21,971,347

Table 16 (Cont.)

Value of Wood Waste Production In Oregon By County 1968 M bd. ft. Scribner

County	Total Log Use - Mbf.	Sawmill Log Use[1]	Tons Wood Residue[1] Recovered	Residue Value* Dollars	Tons Bark Residue[1] Recovered	Bark** Value Dollars	Total Value Sawmill Waste	Log Use For Veneer & Plywood-Mbf	Tons Wood Residue[1] Recovered	Residue Value Dollars	Tons Bark Residue[1] Recovered	Bark** Value Dollars	Total Value Plywood Waste	Total Value Sawmill & Plywood Waste	Value Creditable BLM Logs
BAKER DISTRICT															
Baker	102,020	66,020	37,803	$352,702	4	$333	353,035	36,000	8,028	74,901	0	0	$ 74,901	$ 427,936	$ 11,126
Morrow	22,227	22,227	22,650	211,324	5,216	4,346	215,670	0	0	0		0	0	215,670	0
Umatilla	109,612	109,612	109,464	1,021,299	39,814	33,177	1,054,476	0	0	0		0	0	1,054,476	2,109
Union	212,088	144,088	154,733	1,443,659	25,000	20,833	1,464,492	68,000	70,516	657,914	12,880	10,733	668,647	2,133,139	25,598
Wallowa	36,242	36,242	20,217	188,625	2,250	1,875	190,500	0	0	0		0		190,500	2,667
Subtotal	482,189	378,189	344,867	3,217,609	72,284	60,234	3,277,843	104,000	78,544	732,815	12,880	10,733	743,548	4,021,391	41,500
PRINEVILLE DISTRICT															
Crook	129,588	129,588	107,901	1,006,716	23,484	19,569	1,026,285	0	0	0		0		1,026,285	0
Deschutes	130,472	130,472	146,797	1,369,616	26,797	22,330	1,391,946	0	0	0		0		1,391,946	50,110
Jefferson	70,000	40,000	28,000	261,240	3,384	2,820	264,060	30,000	28,695	267,724	6,389	5,324	273,048	538,108	0
Wasco	73,387	73,387	51,354	479,133	6,203	5,169	484,302	0		0		0		484,302	6,296
Wheeler	35,000	35,000	24,392	227,577	2,945	2,454	230,031	0		0		0		230,031	14,262
Subtotal	438,447	408,447	358,444	3,344,283	62,813	52,342	3,396,625	30,000	28,695	267,724	6,389	5,324	273,048	3,669,673	70,668
BURNS DISTRICT															
Grant	119,887	103,887	56,940	531,250	17,434	14,528	545,778	16,000	0	0	0	0	0	545,778	12,553
Harney	132,160	96,000	97,831	912,763	22,517	18,765	952,953	36,160	37,498	349,856	6,855	5,712	355,568	1,308,521	11,800
Subtotal	252,047	199,887	154,771	1,444,013	39,951	33,293	1,498,731	52,160	37,498	349,856	6,855	5,712	355,568	1,854,299	24,353
LAKEVIEW DISTRICT															
Lake	60,960	60,960	29,467	274,927	8,510	7,091	282,018	0	0	0	0	0	0	282,018	0
E.Ore. Total	1,233,643	1,047,483	887,549	8,280,832	183,558	152,961	8,455,218	186,160	144,737	1,350,395	26,124	21,769	1,372,164	9,827,382	136,521
Oregon Total	9,396,196	5,779,524	6,634,728	76,628,483	955,277	879,364	77,529,282	3,578,494	3,856,635	45,370,908	769,615	641,320	46,012,228	123,541,510	22,107,868

1 - Based on data from 1970 Directory of the Forest Products Industry and "Oregon Timber Product Industries 1968 - Wood Consumption and Mill Characteristics".3/

* Based on a value of $9.33 per ton in southwest and eastern Oregon and $12.27 per tone in western Oregon.27/

**Value at mill $1.00 per unit.22/

Table 18

Value of Wood Waste From BLM Lands Based on New Allowable Cut

BLM District	Allowable Cut	Sawmill Use[1] Mbf	Tons Wood Residue[2] Recovered	Residue Value* Dollars	Tons Bark Residue[3] Recovered	Bark** Value Dollars	Total Value Sawmill Waste	Log Use For Plywood & Veneer -Mbf	Tons Wood Residue[4] Recovered	Wood* Residue Value	Tons Bark Residue[5] Recovered	Bark** Value	Total Value Plywood & Veneer Waste	Total Recovery Value From BLM Logs
Salem	244,000	148,840	203,911	$2,501,988	28,280	$23,566	$2,525,554	90,280	102,016	$1,251,736	23,473	$19,560	$1,271,296	$3,796,850
Eugene	219,000	133,590	183,018	2,245,631	25,382	21,151	2,266,782	81,030	91,564	1,123,490	21,068	17,556	1,141,046	3,407,828
Roseburg	200,100	122,061	135,488	1,662,438	19,530	16,274	1,678,712	74,037	79,220	972,029	13,327	11,105	983,134	2,661,846
Coos Bay	274,000	167,140	185,525	2,276,392	26,742	22,284	2,298,676	101,380	108,477	1,331,013	18,248	15,206	1,346,219	3,644,895
Medford	234,000	142,740	158,441	1,478,255	22,838	19,031	1,497,286	86,580	92,641	864,341	15,584	12,986	877,327	2,374,613
Baker	3,900	2,379	1,856	17,316	452	377	17,693	1,443	1,053	9,824	202	168	9,992	27,685
Prineville	9,100	5,551	4,330	40,399	1,055	879	41,278	3,367	2,458	22,933	471	392	23,325	68,963
Burns	8,900	5,429	4,235	39,513	1,032	860	40,373	3,293	2,404	22,429	461	384	22,813	63,186
Vale	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lakeview	2,000	1,960	1,529	14,266	372	310	14,576	---	---	---	---	---	---	14,576
Total	1,195,000	729,700	878,333	10,276,198	125,683	104,732	10,380,930	441,410	479,833	5,597,795	92,834	77,357	5,675,152	16,056,082

1 - Sawmill use 61% total use, not necessarily in county of harvest 3/
2 - Based on 1968 average production by area, Northwest and West Central Oregon 1.37 tons used per Mbf; Southwest Oregon, 1.11 tons per Mbf; Eastern Oregon 0.78 tons. 3/
3 - Based on 1968 average production by area, Northwest and West Central Oregon 0.19 tons used per Mbf; Southwest Oregon 0.16 tons per Mbf; Eastern Oregon 0.19 tons. 3/
4 - Based on 1968 average production by area, Northwest and West Central Oregon 1.13 tons per Mbf; Southwest Oregon 1.07 tons; Eastern Oregon 0.73 tons per Mbf. 3/
5 - Based on 1968 average production by area, Northwest and West Central Oregon 0.26 tons per Mbf; Southwest Oregon 0.18 tons, Eastern Oregon 0.14 tons per Mbf. 3/

* Average price at mill $12.27 per ton in western Oregon and $9.33 per ton in Medford District and Eastern Oregon. 27/
**Based on $1.00 per unit. 22/

APR 1 1972

Based on a new timber inventory and multiple resource use considerations, in 1970 the BLM commercial forest land base in western Oregon was reduced by 107,000 acres. This was necessary to provide stream buffer zones, scenic roadside corridors, and recreation and scenic areas. Of this, 49,000 acres was classified for no timber cutting and 154,000 acres for restricted cutting. In spite of this, the total BLM timber harvest for western Oregon was increased to 1,171,100 M bd. ft. per year on the basis of intensive forest management practices and inclusion in the harvest program of commercial thinning and mortality salvage. The new allowable cut and anticipated timber sale revenues are shown in Table 19.

Table 19

Anticipated BLM Timber Sale Revenues
Under New Allowable Cut Plan

BLM District	M bd. ft. Allowable Cut	Value*
Salem	244	$12,200,000
Eugene	219	10,950,000
Roseburg	200.1	10,005,000
Coos Bay	274	13,700,000
Medford	234	11,700,000
TOTAL	1,171.1	58,555,000

* Based on $50.00 per M bd. ft. stumpage value.

The value of BLM timber sales from western Oregon and California Revested Grant lands is important to taxpayers since 50% of the returns are given to the counties and help pay the cost of county operations.

b. Wood Products Employment

Table 20 shows that the forest industry payroll creditable to BLM timber sales in 1968 exceeded $65 million. The wood products industry provided the major payroll in the Roseburg and Coos Bay districts. BLM timber provides 20.4% of the total payroll of Josephine County. Contribution to the local economy by timber from the Cascade Resource Area of the Salem district is negligable due to the magnitude of service industries in the Portland area. However, the Coast Resource Area of the Salem district makes a substantial contribution to the payrolls of Benton, Polk, Tillamook, and Yamhill Counties. BLM timber provides a very small percentage of the payrolls in eastern Oregon.

Table 20

BLM's Timber Contribution to Oregon Payrolls 1968[29]

Area & County	Total Payroll	Lumber & Wood Prod. Payroll	Percent Total Payroll	% BLM Timber To Total	Average Wood Prod. Employment	Wood Prod. Employment From BLM Timber	Payroll Credit BLM Timber	BLM % Total Payroll
SALEM DISTRICT								
Coast Resource Area								
Benton	$ 58,460,428	$12,153,187	21%	46.3	1,597	739	$5,626,926	9.6
Clatsop	45,234,789	8,961,335	20	0	1,061	0	0	0
Columbia	28,574,537	8,283,342	29	0.9	1,074	10	74,550	0.3
Lincoln	32,460,790	8,238,091	25	4.6	1,149	53	378,952	1.2
Polk	32,851,768	13,169,996	40	33.1	1,733	574	4,359,269	13.3
Tillamook	20,762,318	10,618,902	51	20.0	1,466	293	2,123,780	10.2
Washington	173,532,587	5,573,661	3	7.6	806	61	423,598	0.2
Yamhill	36,825,406	6,150,436	17	62.0	866	537	3,813,270	10.4
Subtotal	428,702,623	73,148,950	17		9,752	2,267	16,800,345	3.9
Cascade Resource Area								
Clackamas	148,564,846	17,198,093	12	11.5	2,344	270	1,977,781	1.3
Linn	105,786,662	38,375,282	36	9.8	5,320	521	3,760,778	3.6
Marion	216,382,067	6,537,083	3	2.8	916	26	183,038	0.1
Multnomah	1,530,389,674	39,638,422	3	0	4,947	0	0	0
Subtotal	2,001,123,249	101,748,880	5		13,527	817	5,921,597	0.3
Dist. Total	2,429,825,872	174,897,830	7		23,279	3,084	22,721,942	0.9
EUGENE DISTRICT								
Lane	303,880,077	110,019,923	36	11.0	14,704	1,617	12,102,192	4.0
ROSEBURG DISTRICT								
Douglas	116,376,282	60,425,433	52	29.8	7,589	2,262	18,006,779	15.5
COOS BAY DISTRICT								
Coos	92,314,242	44,477,066	48	35.2	5,815	2,047	15,655,927	17.0
Curry	17,938,548	12,125,652	68	9.7	1,544	150	1,176,188	6.6
Subtotal	110,252,790	56,602,718	51		7,359	2,197	16,832,115	15.3
MEDFORD DISTRICT								
Jackson	123,200,247	41,430,090	34	24.0	5,172	1,241	9,943,222	8.1
Josephine	37,484,318	14,522,005	39	52.7	1,906	1,004	7,653,097	20.4
Klamath	65,681,658	25,325,958	39	5.1	3,445	176	1,291,624	2.0
Subtotal	226,366,223	81,278,053	36		10,523	2,421	18,887,943	8.3
W.Ore. Total	3,186,701,244	483,223,957	15		63,454	8,497	88,550,971	2.8

Table 20

BLM's Timber Contribution to Oregon Payrolls 1968[29]

Area & County	Total Payroll	Lumber & Wood Prod. Payroll	Percent Total Payroll	% BLM Timber To Total	Average Wood Prod. Employment	Wood Prod. Employment From BLM Timber	Payroll Credit BLM Timber	BLM % Total Payroll
BAKER DISTRICT								
Baker	$ 18,438,339	$ 4,177,460	22.66	2.6	531	14	$ 108,614	0.6
Umatilla	62,018,592	3,201,948	5.2	0.2	524	1	6,404	0
Union	20,608,966	8,162,271	39.6	1.2	1,095	13	97,947	0.5
Wallowa	5,088,442	1,635,844	32.1	1.4	225	3	22,902	0.5
Subtotal	106,154,339	17,177,523	16.2		2,375	31	235,867	0.2
PRINEVILLE DISTRICT								
Crook	15,087,038	9,259,129	61.4	0	1,413	0	0	0
Deschutes	39,052,937	11,671,830	29.9	3.6	1,742	63	420,186	1.1
Gilliam	1,578,077	---	0	0	---	0	0	0
Jefferson	8,625,198	1,974,833	22.9	0	246	0	0	0
Morrow	2,935,498	1,056,917	36.0	0	147	0	0	0
Wasco	25,185,405	2,550,315	10.1	1.3	325	4	33;154	0.1
Wheeler	2,437,164	2,018,477	82.8	6.2	285	18	125,146	5.1
Subtotal	94,901,317	28,531,501	30.1		4,158	85	578,486	0.6
VALE DISTRICT								
Malheur	23,650,216	257,493	1.1	97.4	47	46	250,798	1.1
BURNS DISTRICT								
Grant	11,016,994	5,491,722	49.8	2.3	710	16	126,310	1.1
Harney	10,743,555	5,182,833	48.2	0.9	656	6	46,645	0.4
Subtotal	21,760,549	10,674,555	49.1		1,366	22	172,955	0.8
LAKEVIEW DISTRICT								
Lake	8,811,557	3,209,521	36.4	0	437	0	0	0
E. Ore. Total	149,123,639	59,850,593	40.1		8,383	184	1,238,106	0.8
Oregon Total	3,504,252,307	547,231,016	15.6	12.0	72,339	8,681	89,789,077	2.6

c. Forest Road Construction

An additional benefit to local economies from BLM forest management programs are the roads built for timber access which in effect enlarge the county transportation system. BLM has built over 6800 miles of road in Oregon representing an investment of over $300 million.[27] In 1971 F.Y. BLM's road construction and maintenance costs came to $14,246,000. Allowances for road construction on timber sales average $7.56 per M bd. ft. On the basis of 1970 F.Y. sales this would equal $12,756,593. This is merely an illustrative figure since not all sales carry road construction allowances. Roads built in connection with timber sales are not as costly or of the same high standards as the main access roads built with appropriated funds. BLM roads are not just logging roads; some provide access to developed recreation sites and hunting and fishing areas.

Of the 1971 F.Y. $14,246,000 expenditure for BLM roads, about $10,970,000 was for road construction and $3,276,000 for maintenance. BLM road construction expenditures provide jobs and direct economic benefits to local economies. Forest Service studies show employment for forest logging road construction averages one man year employment per five million board feet of logs harvested.[28] Thus BLM's road construction program provides work for 355 people based on 1970 F.Y. sales. Since 23% of BLM's road money is spent on maintenance, this activity would support another 106 yearlong jobs. Most of BLM's road construction is in western Oregon. Evaluation of economic benefits from road building will be included as part of the economic benefits from logging as is done in the Forest Service Experiment Station Study.[28]

3. Community Impact of BLM Timber Sales

On a statewide basis BLM provides a relatively small part of the wood fiber consumed by Oregon mills. However the economy of some counties and towns is highly dependent on the availability of BLM stumpage. Tables 21 to 45 were developed to show the relative dependency on BLM timber for employment and economic well being of various towns and communities.

a. Economic Dependency of Benton County on BLM Timber in 1968, Salem District

The ratio of basic to service employment was 1 to 3.4, reflecting a large service industry segment serving Oregon State University. The University is a service industry dependent on the basic industries of the entire state rather than that of Benton County. For this reason college faculties are excluded from the employment figures used in examining the county's economy. However the large number of students attending OSU support a fairly large service type industry, weighing the employment picture in this direction.

Table 21 shows in 1968 there were 16 sawmills, two veneer, and two plywood plants in Benton County. BLM made timber sales to four logging firms, four sawmills, and one veneer plant. None of the small Class D mills were successful in bidding on BLM stumpage. The large size sawmills took most of the BLM timber sold. Some of the stumpage purchased by loggers may have gone to plywood mills in Benton County.

In 1968 BLM timber comprised 46.3% of the total harvest in the county and provided jobs for 352 people, 3.3% of total covered employment. BLM timber was of major economic importance to three of the six towns in the county. These were Alsea, population under 500, Monroe, population 387, and Philomath, population 1,681. Both mills in Monroe were 100% dependent on BLM timber. It appears that BLM timber provided nearly all the employment, both basic and the service type employment dependent on it.

Alsea Lumber Company is the major source of employment in the town of Alsea. In 1968 BLM supplied 62% of its timber. On this basis the economy of Alsea is highly dependent on continued availability of BLM timber.

Although BLM stumpage comprised nearly 25% of the known timber consumption by mills in Philomath, only 2 of the 11 mills purchased BLM timber in 1968.

Based on the state average of one worker in covered employment per 3.77 population,[30] Philomath had a work force of 446 people in 1968. There were more mill workers than this, indicating the mills were pulling in workers from the surrounding area. BLM timber provided from 15% to 25% of the employment in Philomath. On the other hand BLM resources had little impact on the economy of Corvallis, except to the extent its service industries met the needs of the forest industry workers in Alsea, Philomath, and Monroe.

b. Economic Dependency of Clatsop County Mills on BLM Timber in 1968, Salem District

No BLM timber was harvested in Clatsop County in 1968. BLM has jurisdiction of only 1,076 acres in the county and timber production from this would have little impact on the economy.

Table 26

Economic Impact of BLM Timber Sales in Benton County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment	Employmen Credit BLM **
Alsea Lbr. Co.	Alsea	*	2	8,633	13,875	62%	C	72	45
Baflam Veneer	Corvallis	34,798	0	0	3,431[3]	0	Ply	30**	
Brand S Corp Ply.	Corvallis	34,798	0	0	5,432[3]	0	Ply	47**	0
Brand S Corp. Lbr.	Corvallis	34,798	0	0	n.a.	0	Ply	n.a.	0
Georgia-Pacific Ply	Corvallis	34,798	0	0	14,868[3]	0	Ply	130**	
Continental Const.	Corvallis	34,798	1	5,746	n.a.	-	-	--	29
Evans Products	Corvallis	34,798	0	0	n.a.	-	D	--	
Larson Lbr. Co.	Corvallis	34,798	0	0	18,500[3]	0	B	120**	
Frank Watenpaugh	Corvallis	34,798	1	125	n.a.	-	-	--	1
Total Corvallis			2	5,871	42,231	13.9		327	30
Murphy Logging	Florence	2,193	1	802	n.a.	-	-	--	4
Mt. Fir Lbr. Co.	Independence	2,559	0	0	32,300	-	B	--	0
Hull Oakes Lbr. Co.	Monroe	387	9	18,234	13,875	100	C	66	91
I. P. Miller	Monroe	387	9	17,933	14,800	100	B	85	85
Total Monroe			18	36,167	28,675	100		151	186
Clemens For. Prod.	Philomath	1,681	12	21,033	52,000	40	A	52	21
Rex Veneer	Philomath	1,681	2	7,836	4,860[3]	100	Veneer	48	55
Ellison Bro. Lbr.	Philomath	1,681	0	0	n.a.	0	D		
Hobin Lbr. Co.	Philomath	1,681	0	0	n.a.	0	D		
Hoskins Lbr. Co.	Philomath	1,681	0	0	6,975	0	C	43**	
Mid Willamette Lbr.	Philomath	1,681	0	0	18,500[3]	0	B	120**	
Mika Lbr. Co.	Philomath	1,681	0	0	n.a.	0	D		
North Side Lbr.	Philomath	1,681	0	0	11,100[3]	0	C	64**	
Taylor-Hart Lbr.	Philomath	1,681	0	0	6,900[3]	0	C	43**	
3 G Lbr. Co.	Philomath	1,681	0	0	17,126	0	C	89**	
West Coast Lbr.	Philomath	1,681	0	0	n.a.	0	D		
Total Philomath			14	28,869	117,461	24.6		459	76
Shipler Logging	Salem	68,309	1	2,189	n.a.	-	-	n.a.	11
TOTAL Benton Co. 23 plants			38	82,531	234,542	35.2		1,597	352
									3.3%

* Less than 500 population ** Based on 5 employees per 1 mbf lumber and 8.72 plywood.[28] 1 - Logging employment only

2 - Class D - daily production up to 40 mbf/day, Class C 40-79 mbf, Class B 80-119 mbf, Class A 120 plus mbf.

3 - Computed from Forest Service study[3] 4 - 1970 Directory Forest Prod. Industry

c. Economic Dependency of Columbia County Mills on BLM Timber in 1968, Salem District

As shown in Table 22, BLM timber was only 0.9% of the total harvest in Columbia County in 1968, furnishing direct employment to only 46 people. Impact on the economy was negligable.

d. Economic Dependency of Lincoln County Mills on BLM Timber in 1968, Salem District

Although 20,830 M bd. ft. BLM stumpage was cut in Lincoln County in 1968, most of it was transported outside the County for processing. BLM related employment was largely limited to roadbuilding to gain access to BLM timber plus logging and trucking. Only one small mill in the county bought BLM timber in 1968.

Table 22

Economic Impact BLM Timber Sales in Columbia County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment	Employment Credit BLM**
Crown-Zellerbach	Columbia City	430	2	4,911	58,100	8%	A	114	25**
Beaver Lumber	Clatskanie	1,275	0	0	7,255[3]	0	C	36**	0
Clatskanie Tbr. Prod.	Clatskanie	1,275	0	0	n.a.	0	D	40	0
Total Clatskanie			0	0	7,255			76	0
Allied J&H Lbr. Co.	Mist	*	0	0	n.a.	0	D	34	0
Ranier Mfg. Co.	Rainier	1,707	0	0	131,000		A	185	
Frieson Lbr. Co.	St. Helens	6,182	0	0	40,000	0	A	50	0
Pope & Talbot	St. Helens	6,182	0	0	27,200[3]	0	A	136**	0
Crown-Zellerbach	St. Helens	6,182	0	0	n.a.	0	Ply	n.a.	0
Multnomah Ply. Corp.	St. Helens	6,182	0	0	19,390	0	Ply	169**	0
Total St. Helens					86,590	0		375	
Riesterer Lbr. Prod.	Scappoose	1,843	0	0	6,000	0	C	n.a.	0
Northwest Piling	Scappoose	1,843	2	4,206	n.a.	-	-	-	21
Total Scappoose			2	4,206	10,206	41.2			21
Total Columbia County	11		4	9,117	293,151	2.5		1,074[5]	46

Table 23 - Lincoln County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment	Employment Credit BLM**
Alder Mills, Inc.	Burnt Woods	*	1	213	n.a.	n.a.	n.a.	n.a.	1
W.O.W. Lbr. Co.	Eddyville	*	0	0	12,000	0	C	27	0
Cascadia Lbr. Co.	Toledo	2,727	0	0	50,000	0	A	250**	0
Georgia Pacific Ply.	Toledo	2,727	0	0	27,810[3]	0	Ply	243	0
Georgia Pacific	Toledo	2,727	0	0	12,210	0	B	61	0
Roberts Lbr. Co.	Toledo	2,727	0	0	9,990[3]	0	B	44	0
Total Toledo			0	0	100,010	0		598	0
Beaver Cr. Lbr. Co.	Waldport	777	0	0	8,880	0	B	45**	0
M&W Lbr. Co.	Waldport	777	0	0	34,000	0	A	170**	0
McKinley Lbr. Co.	Waldport	777	0	0	1,850	0	D	9	0
Total Waldport			0	0	44,730			224	
Total Lincoln County	9		1	213	156,740	0.12		1,149[5]	

*Less than 500 population **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per mm bd. ft. ply.[28]
1 - Logging employment only 2 - Class D - daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service Study[3] 4 - 1970 Directory Forest Products Industry, 51st ed.
5 - Oregon Covered Employment & Payrolls 1968, State of Oregon Employment Division.

e. Polk County Dependency on BLM Timber in 1968, Salem District

There were 7,006 workers in Polk County under covered employment in 1968. Ratio of workers in basic industry to those in service industry was 1 to 0.8. The city of Salem in Marion County is a major trading center for this area, reducing the need for service employment in Polk County. Table 24 shows that BLM sold 85,705 M bd. ft. timber in Polk County in 1968. Only about a third, 32,603 M bd. ft. was harvested in 1968. Even so this was 1/3 of the total timber consumption in the county, providing employment for about 586 people, being 10.6% of total covered employment. Three of the six towns in the county were from 25% to 42.9% dependent on BLM timber to keep their mills going. These were Independence, population 2,599, 42.9% dependent on BLM wood; Dallas, population 6,379, 32.3% dependent; and Grande Ronde, population under 500, 25.1% dependent on BLM stumpage. Nearly 30% of the timber cut was transported out of the county for processing.[37] Three out of the four BLM timber sales went to the big mills. Fort Hill Lumber Company at Valley Junction was the one small mill 100% dependent on BLM stumpage. Since agriculture is of minimal importance in this area, the approximately 27 workers at Fort Hill Lumber Company probably support another 27 workers in service type industries in the area, such as service stations, restaurants, beer parlors, etc. On this basis, continued availability of BLM timber is basic to the economic well being of the Valley Junction area. Wood products provide 26% of the covered employment in the county, half of the basic industry employment.

Table 24

Economic Impact of BLM Timber Sales In Polk County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment	Employment Credit BLM**
Willamette Industries	Dallas	6,379	15	25,313	69,255	46%	A	n.a.	127
Willamette Ind., Ply	Dallas	6,379	0	14,867	48,559	0	-	423**	130
PeDee Lbr. Co.	Dallas	6,379	0	0	n.a.	0	D	n.a.	0
La Creole Lbr. Co.	Dallas	6,379	0	0	6,475	0	D	32**	0
Total Dallas			15	40,180	124,289	32.3		662	251
U. S. Plywood	Eugene		3	2,632	See Lane County Data --------			4	n.a.
Fort Hill Lbr. Co.	Grande Ronde	*	3	8,102	5,100	100	D	27**	41
Oregon-American Studs	Grande Ronde	*	0	0	22,000	0	B	110**	0
S&C Lbr. Co.	Grande Ronde	*	0	0	2,000	0	D	10**	0
North West Veneers	Grande Ronde	*	0	0	3,195	0	Ply	28**	0
Total Grande Ronde			3	8,102	32,295	25.1		175	41
Mt. Fir Lbr. Co.	Independence	2,559	3	16,385	32,300	35	B	n.a.	82
Boise-Cascade Lbr.	Independence	2,559	6	16,898	n.a.	--	A	n.a.	85
Boise-Cascade Ply	Independence	2,559	0	0	45,364	0	Ply	396	0
Total Independence			9	33,283	77,664	42.9		556	167
B.J. Lbr. Co.	PeDee	*	0	0	n.a.	0	D	n.a.	0
Capital Lbr.	Salem		1	1,508	See Marion County Data ------			2	n.a.
Boise Cascade Ply	Valsetz	*	0	0	30,669	0	Ply	267**	0
Total Polk County			31	85,705	264,917	32.4		1,808[29]	586[5]
Total Stumpage to Veneer and Plywood					127,787				

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lumber and 8.72 per 1 mm bd. ft. plywood.[28] 1 - Logging employment only. 2 - Class D daily prod. up to 40 mbf, Class C 40-79 mbf/day, Class B 80-119 mbf/day and Class A daily prod. 120 plus mbf/day. 3 - Computed from Forest Service Study[3] 4 - 1970 Directory Forest Products Industry, 51st ed. 5 - On a proportional basis of BLM timber to total consumed.

f. Economic Dependency of Tillamook County Mills on BLM Timber in 1968

The ratio of basic to service industry in Tillamook County is 1 to 1. Total covered employment in 1968 was 3,872 of which 1,536 was in lumber and wood products, 40% of the total. BLM provided 20% of the timber harvest in the county in 1968, providing jobs for about 300 of these workers.

The woodworking industry consists of 3 large sawmills, 4 small mills, 1 plywood plant and 1 veneer plant as shown in Table 25. The BLM timber sales were purchased by 2 of the largest mills, the plywood mill, and one logger. Three out of the seven BLM sales went to plants outside the county. The 300 workers dependent on BLM timber supported an additional 300 in service industries in the county for a total of 600 jobs dependent on BLM timber, 15.5% of total employment. The communities of Beaver, Garibaldi and Tillamook showed substantial dependency on BLM timber.

Table 25

Economic Impact of BLM Timber Sales In Tillamook County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM**
Vernon Scheese	Beaver	*	3	3,212	n.a.	--			16
Boggs Lbr.	Beaver	*	0	0	1,680	0	D	8**	0
Total Beaver			3	3,212	1,680	n.a.		24	16
U.S. Plywood	Eugene	77,284	1	53	See Lane County Data --------------------				1[1]
Stimson Lbr.	Forest Grove	8,203	2	84	See Washington County Data --------------				1[1]
Erickson Lbr.	Garibaldi	1,060	0	0	2,400	0	D	12**	0
Oregon-Wash. Ply	Garibaldi	1,060	2	6,910	12,756[3]	54	Ply	111**	60
Total Garibaldi			2	6,910	15,156	45.6		123	60
Mt. Fir Lbr. Co.	Independence	2,559	1	11,161	See Polk County Data -------------------				n.a.
North West Piling	Scappoose	1,843	1	3,449	See Columbia County Data ---------------				n.a.
Diamond Lbr.	Tillamook	3,910	10	12,968	48,000	27	A	240**	85
North Plains Lbr.	Tillamook	3,910	0	0	13,440	0	B	67	0
Publisher's Paper	Tillamook	3,910	7	4,191	75,000	5.5	A	200	21
T.V. Studs	Tillamook	3,910	0	0	5,040	0	D	25**	0
Tillamook Hdwds. Inc.	Tillamook	3,910	0	0	n.a.	0	D	n.a.	0
Tillamook Veneer	Tillamook	3,910	1	13	13,276[3]	-	Veneer	116**	0
Total Tillamook			18	17,172	154,756	11.0		648	96
Auron Bros.	Willamina	1,181	1	230	See Yamhill County Data ----------------				1[1]
Joe Grimm	Willamina	1,181	3	128	See Yamhill County Data ----------------				1[1]
Ore-Alder Maple	Willamina	1,181	3	4,118	See Yamhill County Data ----------------				6[1]
Total Willamina			7	4,476					8
Total Tillamook County			35	46,517	177,100[3]	26.3		1,466[29/]	386[5/]

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lumber and 8.72 per 1 mm bd. ft. plywood.[28/]

1 - Logging employment only. 2 - Class D daily production up to 40 mbf, Class C 40-79 mbf production per day, Class B 80-119 mbf/day, Calss A 120 plus mbf/day. 3 - Compiled from Forest Service Study[37/] 4 - 1970 Directory Forest Products Industry.

5 - On a proportional basis of BLM timber to total consumed.

g. Economic Dependency of Washington County Mills on BLM Timber in 1968

BLM stumpage was only 4.1% of the timber cut in Washington County in 1968. Table 26 shows that Forest Grove mills took all BLM sales in 1968, limiting benefits to that particular area of the county. The relative small amount of BLM timber used reflects a minor impact on the economies of either Washington County or Forest Grove.

Table 26

Economic Impact of BLM Timber Sales in Washington County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual^4 Wood Consumption mbf	% BLM Timber	Size Class Mill^2	Employment^4	Employment Credit BLM^6
Ennes Lbr. Co.	Aloha	*	0	0	2,760	0	D	14**	0
Banks Lbr. Co.	Banks	347	0	0	n.a.	0	D	n.a.	0
Force Lbr. Co.	Cornelius	1,831	0	0	1,000	0	D	5**	0
Howell Lbr. Co.	Cornelius	1,831	0	0	3,320	0	D	17**	0
Larkins Lbr. Co.	Cornelius	1,831	0	0	11,760	0	C	59**	0
Rice Lbr.	Cornelius	1,831	0	0	n.a.	0	D	n.a.	0
Total Cornelius			0	0	16,080	0		81	0
Forest Grove Lbr.	Forest Grove	8,203	4	3,105	19,000	16.3	B	95**	16
Stimson Lbr. Co.	Forest Grove	8,203	4	117	n.a.	-	C	n.a.	1
Total Forest Grove			8	3,222	19,000	17.0		95	17
Marshal Bro. Lbr.	Gales Creek	*	0	0	1,000	0	D	5**	0
Van Loo & Son	Gales Creek	*	0	0	n.a.	0	D	n.a.	0
Redner & McLeod	Gaston	320	0	0	1,176	0	D	6	0
Stratemeyer Mill	Gaston	320	0	0	370	0	D	3**	0
Total Gaston			0	0	1,546	0		9	0
Permapost Prod.	Hillsboro	14,469	0	0	(5,000)	0	Planing	25	n.a.
North Plains Lbr.	North Plains	682	0	0	16,580	0	A	25 ~~83**~~	0
Sunset Lbr. Prod.	North Plains	682	0	0	n.a.	0	D	n.a.	0
Total North Plains				0	16,580	0		~~83~~ 25	
Conrad Veneers	Tualatin	380	0	0	2,720	0	Veneer	24**	0
Stimson Lbr. Veneer	Forest Grove	8,203	0	0	19,530	0	Veneer	170**	0
Total Washington County	17		8	3,222	79,216	4.1		806^5	33

Michael Short

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.[28]
1 - Logging employment only. 2 - Class D daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service study.[3] 4 - 1970 Directory Forest Products Industry, 51st ed.
5 - Oregon Covered Employment & Payrolls 1968, State of Oregon Employment Div. 6. on a proportional basis re. BLM timber to [illegible]

h. Economic Dependency of Yamhill County Mills on BLM Timber in 1968

Total employment in Yamhill County was 7,266 in 1968. Ratio of basic to service industry was 1 to 1.4. Wood products employment was 911, 12.5% of the total. BLM provided 62% of the timber used, supporting 565 jobs in basic industry which in turn supported 791 jobs in service industry, a total of 1,356 jobs. On this basis BLM provided 18.7% of the total employment in Yamhill County in 1968.

Table 27 shows a great deal of both log export from the county and log imports into the county. Eighty-three percent more timber is processed in the county than is harvested. Logs from Tillamook County come to Willamina, Sheridan and McMinnville. Mills in Willamina, population 1,181, were most dependent on BLM stumpage to the extent of 25.8% of known use. Oregon Alder-Maple sawmill, a class B mill at Willamina employing 60 people, appears almost entirely dependent on availability of BLM timber. No other mill in the county showed high dependency on BLM stumpage.

Table 27

Economic Impact of BLM Timber Sales in Yamhill County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Willamette Industries	Dallas	6,379	4	8,163	See Polk County Data --------------------				n.a
Forest Grove Lbr.	Forest Grove	8,203	4	3,105	See Washington County Data --------------				n.a
Mt. Fir Lbr.	Independence	2,559	2	5,224	See Polk County Data --------------------				n.a.
Jack Larson	Lebanon	6,372	5	149	See Linn County Data --------------------				1
Lay Rite Lbr.	McMinnville	9,941	0	0	8,400	0	C	42**	0
O. L. Stevens	McMinnville	9,941	2	76	n.a.	-	n.a.	n.a.	1
Beaudry Lbr.	Newburg	5,093	0	0	2,520[3]	-	D	13**	0
Daryl Cate	Newburg	5,093	0	0	1,344	0	D	3	0
Northwest Piling	Scappoose	1,845	1	757	See Columbia County Data ----------------				n.a.
Cross & Son	Sheridan	1,854	4	199	n.a.	n.a.	n.a.	n.a.	1
Taylor Lbr.	Sheridan	1,854	0	0	18,540[3]	0	C	93**	0
Morton Alder	Willamina	1,181	0	0	3,000	0	D	15**	0
Oregon Alder Maple	Willamina	1,181	14	19,594	24,000	82	B	60	55
Riverside Lbr.	Willamina	1,181	0	0	n.a.	0	n.a.	n.a.	0
Stone Lbr.	Willamina	1,181	0	0	n.a.	0	n.a.	n.a.	0
Willamina Lbr.	Willamina	1,181	4	4,772	50,000	9.5	A	250	24
U.S. Plywood	Willamina	1,181	0	0	17,554	0	Ply	n.a.	0
Total Willamina			18	24,366	94,554	25.8			79
White City Plywood	McMinnville	9,941	0	0	28,466	0	Ply	n.a.	0
D. L. Veneer	McMinnville	9,941	0	0	1,423	0-	Veneer	n.a.	0
Total Yamhill County		17	40	42,039	155,247	26.5		866[5]	~~100~~ 229[6]
Total Plywood & Veneer					47,443				

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm db. ft. plywood.[28] 1 - Logging Employment only. 2 - Class D daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.[3] 4 - 1970 Directory of Forest Products Industry, 51st ed. 5 - Oregon Covered Employment & Payrolls 1968, State of Oregon Employment Div. 6. on a proportional basis re, BLM timber to total used

i. Dependence of Clackamas County Mills on BLM Timber, Cascade Resource Area, Salem District

Covered employment in Clackamas County totalled 25,008 in 1968. Rates of basic industry to service industry was 1 to 1.7, reflecting a high development of service type industry. Wood products employment was 2,535, 10% of total employment. BLM stumpage used was 11.5% of the total, supporting 292 jobs in the industry. These in turn supported around 496 jobs in service industries.

Table 28 shows there are 22 sawmills, 2 veneer plants, and 1 plywood plant in the county. Forty percent of the BLM 1968 Clackamas County stumpage sold was purchased by plants outside Clackamas County. Only 2 of the big Class A mills in the county were successful in purchasing BLM timber. These were Publisher's Paper and Avison Lumber, both at Molalla. BLM stumpage provided 17% of the wood products employment in Molalla, a town of 1972 population. Based on the state average of 1 worker per 3.77 people, there would be a work force of 523 people in Molalla. The 142 jobs provided by the BLM stumpage did make a substantial contribution to that town's economy but was relatively unimportant on a county basis.

Table 28

Salem District BLM Timber Sales Contribution to Local Economies Clackamas County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Simpson Tbr.	Albany	17,944	3	495	See Linn County Data ----------------------				.2[1]
Schmidt Bros.	Beaver Creek	*	0	0	50	0	D	2	0
Chaney Lbr. Co.	Boring	*	0	0	6,200	0	D	22	0
Harris Lbr.	Boring	*	0	0	5,516	0	D	30**	0
Valberg Tbr. Corp.	Boring	*	0	0	10,000	0	C	63	0
Vanport Mfg. Co.	Boring	*	0	0	50,000	0	A	40**	0
Total Boring			0	0	71,716	0		155	0
Mt. Hood Lbr. Co.	Brightwood	*	0	0	2,016	0	D	10**	0
Rollin Lbr. Co.	Carver	*	0	0	10,000	0	C	63**	0
Lynnwood Lbr.	Clackamas	*	0	0	n.a.	0	n.a.	n.a.	0
Rollin Lbr. Co.	Clackamas	*	0	0	15,900	0	C	58	0
Joe Staley Lbr.	Clackamas	*	0	0	5,400	0	C	33**	0
Total Clackamas			0	0	21,300	0		91	0
E. Stahlnecker	Colton	*	0	0	2,180	0	D	13**	0
Willard Deardorff	Canby	3,755	1	62	n.a.	-	n.a.	n.a.	1
Crown Zellerbach	Columbia City	430	2	4,911	See Columbia County Data -----------------				7[1]
C&L Lbr. Co.	Eagle Creek	*	0	0	9,500	0	C	15	0
Park Lbr. Co.	Estacada	1,146	0	0	25,700	0	A	155	0
Freres Veneer	Lyons	590	2	111	See Marion County Data ------------------				1[1]
H.A. Burroughs	Molalla	1,972	2	79	n.a.	n.a.	n.a.	n.a.	1
Avison Lbr.	Molalla	1,972	1	711	61,124	1	A	195	3
Kropf Lbr.	Molalla	1,972	0	0	5,800	0	C	33	0
Low Lbr.	Molalla	1,972	0	0	10,160	0	B	58	0
Publisher's Paper	Molalla	1,972	16	24,440	62,900	38	A	365**	137[1]
Weyerhaeuser Tbr.	Molalla	1,972	1	115	n.a.	n.a.	A	n.a.	1[1]
Total Molalla			20	28,345	139,984	17		651	142

Table 23 (Cont.) Clackamas County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
BCK Co.	Oregon City	9,009	0	0	22,700	0	B	113	0
Publishers Paper	Oregon City	9,009	0	0	n.a.	0	n.a.	n.a.	0
Samuels Lbr.	Oregon City	9,009	0	0	5,400	0	C	36	0
Total Oregon City			0	0	28,100	0		149	0
Walter Koch Lbr.	Sandy	1,516	0	0	14,500	0	B	88**	0
OJA Lbr. Co.	Sandy	1,516	0	0	5,800	0	C	33**	0
Firwood Veneer	Sandy	1,516	0	0	9,770	0	Veneer	85**	0
Total Sandy			0	0	30,070	0		229	0
Capitol Lbr.	Salem	68,309	1	4,593	See Marion County Data ------------------				7[1]
Burkland Lbr.	Turner	820	1	8,564	See Marion County Data ------------------				12[1]
Milwaukie Ply	Milwaukie	15,990	0	0	13,020	0	Ply	114**	0
Diamond Lbr. Co.	Estacada	1,146	0	0	9,783	0	Veneer	85	0
Total Clackamas County			30	47,081	363,419	11.3		2,344 29/	265[5]

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bf. ft. plywood. 28/ 1 - Logging employment only. 2 - Class D daily production up to 40 mbf per day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service study. 3/ 4 - 1970 Directory of Forest Products Industry, 51st ed.

5 - On a proportional basis of BLM timber to total consumed.

j. Dependence of Linn County Mills on BLM Timber in 1968, Cascade Resource Area, Salem District

Covered employment in Linn County totalled 17,520 in 1968. Ratio of basic to service industry was 1 to 0.7, reflecting a high dependency on the city of Salem in Marion County for its trade and services. Wood products employment was 5,676 or 32.4% of total. BLM stumpage cut was 9.8% of total county harvest, supporting 556 of these jobs plus 389 jobs in service industries. These 945 jobs creditable to BLM timber constituted 5.4% total employment in Linn County.

Table 29 shows there were 19 sawmills, 5 plywood plants, and 2 veneer plants in the county in 1968, with only two more mills in the small C and D classes than in the larger size mills. Of the 1968 BLM stumpage sold in the county, nearly 50% went to the two big Class A mills, 10% to the small mills, nearly 20% to veneer plants, and the balance to plywood mills.

Only 2 towns in Linn County showed economic dependency on BLM timber. These were Lyons, population 590, and Sweet Home, population 3,757. BLM stumpage supported 50% of the employment in Lyons. It accounted for 25.6% of the forest industry employment in Sweet Home and 18.2% of its total covered employment.* BLM stumpage also supported about 10% of the wood products employment in Lebanon.

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* based on a state average of one worker in covered employment per 3.77 population.[30]

Table 29

Salem District Timber Sales Contribution to Sawmill & Plywood Employment in Linn County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Duraflake Co.	Albany	17,944	0	0	n.a.	0	-	n.a.	0
Edwards Bros. Const.	Albany	17,944	0	0	n.a.	0	n.a.	n.a.	0
American Con.	Brownsville	880	1	3,295	55,700	6	A	279	16
Forest Industries	Brownsville	880	0	0	n.a.	0	n.a.	n.a.	0
Tomco Inc.	Cascadia	*	1	883	n.a.	-	n.a.	n.a.	4**
James Lbr. Co.	Crabtree	*	0	0	n.a.	0	n.a.	n.a.	0
Willamette Indust.	Foster	*	See Sweet Home Mill		14,800	n.a.	B	79	-
Willamette Ind. Ply	Foster	*	See Sweet Home Mill		40,760	n.a.	Ply	355	-
Willamette Ind. Ply	Lebanon	6,372	See Sweet Home Mill		28,122	n.a.	Ply	245	
Bauman Lbr.	Lebanon	6,372	0	0	18,500	0	B	93	0
Lebanon Lbr.	Lebanon	6,372	0	0	5,400	0	A	80	0
U.S. Ply - Champ.	Lebanon	6,372	2	11,995	71,094	16.9	Ply	620	105
Total Lebanon			2	11,995	123,116	9.7		1,038	105
Vancouver Ply.	Albany	17,944	0	0	106,800	0	Ply	931	0
Freres Lbr.	Lyons	590	4	5,823	n.a.	-	n.a.	n.a.	29
Freres Veneer	Lyons	590	3	9,794	17,695	55.3	Veneer	154	85
Stout Lbr.	Lyons	590	0	0	12,000	0	C	60	0
Total Lyons			7	15,617	29,695	52.6		214	114
Lowers & Holm Lbr.	Scio	494	0	0	10,000	0	C	4	0
Lulay Lbr. Co.	Scio	494	0	0	18,000	0	B	30	0
Total Scio			0	0	28,000	0		34	0
Clad Wood Co.	Sweet Home	3,757	0	0	n.a.	0	n.a.	n.a.	0
Clear Lbr.	Sweet Home	3,757	0	0	14,850	0	C	20	0
Frieson Lbr.	Sweet Home	3,757	0	0	4,625	0	D	20	0
Holley Woodworking	Sweet Home	3,757	0	0	3,700	0	D	31	0
Willamette Ind.	Sweet Home	3,757	13	25,857	77,440	33	A	387	128
Mid Ply, Inc.	Sweet Home	3,757	0	0	17,695	0	Ply	154	0
Sweet Home Veneer	Sweet Home	3,757	5	6,015	10,743	56	Veneer	94	53
Total Sweet Home			18	31,872	129,053	24.7		706	181
Total Linn County				63,662	527,924	12.0		5,320 [29]	638[5]

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.[28] 1 - Logging employment only. 2 - Class D daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service study.[3] 4 - 1970 Directory Forest Products Industry, 51st ed. 5. ON a proportional basis re. BLM Timber to total used.

k. Dependency of Marion County mills on BLM Timber in 1968, Cascade Resource Area, Salem District

Covered employment in Marion County was 42,057 workers in 1968. Ratio of basic to service industries was 1 to 3.9. The high ratio of service employment reflects the dependency of adjacent counties on Salem as a trading center as well as its being the center of state government. For this reason the wood products industry does not dominate the county's economy as it does in most other western Oregon counties. The 1,006 wood product workers equal only 2.4% of total covered employment.

Table 30 shows a fairly even distribution in numbers of mills by size class, two plywood mills, and one veneer plant. The only major BLM timber sale in 1968 sold to a processor in the county went to the big, Class A mill, Capital Lumber Company in Salem. The 33 jobs creditable to BLM timber were relatively insignificant in comparison to Salem's population of 68,309.

l. Multnomah County Industry Dependency on BLM Timber in 1968, cascade Resource Area, Salem District

Covered employment in Multnomah County was 229,475 in 1968. Ratio of basic to service industries was 1 to 3.2, identifying the Portland area as a major trading center rather than a manufacturing area. Wood products employment was only 5,110, 2.2% of total employment. No BLM timber was cut in the county in 1968. The relatively small BLM timber inventory in the county limits size of sales to the degree that they cannot make a significant impact on the county's economy. However since Portland serves all of western Oregon as a trading center, its economy is affected by BLM's timber sale program in western Oregon.

Table 5D

Salem District Timber Sales, Cascade Resource Area, Marion County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Pacific Adhesives	Aumsville	420	0	0	18,000	0	B	n.a.	0
Willamette Plywood	Aumsville	420	0	0	12,409	0	Ply	108	0
Westwood Hardwood	Aurora	336	0	0	n.a.	0	n.a.	n.a.	0
Simpson Tbr.	Idanha	334	0	0	19,048	0	Veneer	165**	0
Jenkins Hdwds.	Mehama	*	0	0	1,850	0	D	9**	0
Cedar Lbr. Co.	Mill City	1,429	0	0	6,150	0	C	61**	0
Frank Lbr. Co.	Mill City	1,429	0	0	25,100	0	B	90	0
North Santiam Ply.	Mill City	1,429	0	0	24,818	0	Ply	216	0
Total Mill City			0	0	89,375	0		367	0
Capitol Lbr.	Salem	68,309	2	6,101	15,000	40.7	A	75	31
John Schurter	Salem	68,309	2	334	n.a.	n.a.	n.a.	n.a.	2
Oregon Tbr. Prod.	Salem	68,309	0	0	n.a.	0	n.a.	n.a.	0
Total Salem			4	6,435	15,000	42.9		75	33
Johnson Bros.	Silverton	4,289	0	0	13,000	0	C	65**	0
Schothefor Logging	Stayton	3,137	1	350	n.a.	n.a.	n.a.	n.a.	2
Publisher's Paper	Oregon City	9,009	4	2,513	See Clackamas County Data -----------------				n.a
Burkland Lbr.	Turner	820	0	0	77,500	0	A	135	
Total Marion County	13		9	9,298	194,875	4.8		916 29	44[5]

Multnomah County

Total Multnomah County ------------ No BLM Timber Cut in 1968 ---------

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.28/ 1 - Logging employment only 2 - Class D daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.3 4 - 1970 Directory Forest Products Industry, 51st ed. 5, on a proportional basis of BLM timber to total

m. Lane County Industry Dependency on BLM Timber in 1968, Eugene BLM District

The wood processing industry of 7 towns in Lane County show substantial dependency on BLM timber, as shown in Table 31. These are Creswell, population 1,154; Culp creek with less than 500 population; Eugene, population 77,284; Florence, population 8,333; Junction City, population 2,345; Mapleton, population under 500, and Noti also with population under 500 people. Although a large amount of BLM timber was purchased by mills in Springfield, it was a small portion of total wood consumption in that city.

Most of the employment in Creswell is wood industry based of which BLM timber provided 20.7%. However BLM timber supplied jobs for only 11.4 of the total labor force of 306.*

BLM stumpage supported from 40-50% of the forest products employment in Culp Creek where employment is practically limited to this industry.

Although large volumes of BLM timber were acquired for use by Eugene mills, BLM timber had only minor impact on the economy of the city of Eugene. This is because Eugene is the major trading and service center for southwest Oregon. Thus the economy of Eugene is dependent on the economies of not only the rest of Lane County but also that of Douglas, Coos, and Curry Counties. Thus adequate supplies of BLM timber in all of southwest Oregon are of concern to the city of Eugene. On the other hand due to the diversity of its industry, Eugene's economy is not affected by depressed conditions in the forest industry to the same extent as are other towns in this part of the state. Eugene's total work force is estimated at 20,500 people.* Although BLM timber provides for about 10% of the forest industry jobs, this equals only about 2% of the total work force in the city.*

Although the city of Florence has an important tourist industry, the wood products industry provides the major employment. Total work force is around 582 people with BLM stumpage providing work for 7%, being about 29% of forest products employment.

With construction of Interstate 5, Junction City lost much of its tourist trade, intensifying its economic dependency on the forest products industry. From about 622* workers, at least 513 are employed in wood processing. BLM timber sustains from 35% to 40% of these jobs, providing employment for 30% of the total local work force.

*Based on a state average of 1 covered employment worker per 3.77 population.30/

Mapleton is a "sawmill" town, supporting 2 big sawmills and a plywood plant. Its existence appears to depend on these mills. Practically all employment is wood oriented. BLM timber sales supported from 18 to 24% of the jobs in 1968.

The town of Noti seems to depend on its 2 sawmills for its economic well-being and source of employment. About 3/4 of its timber supply came from BLM lands in 1968. If 1968 dependency is typical, then any substantial reduction in BLM timber supplies could result in economic disaster to this community. Timber utilization of the 1968 Eugene District sales was 64.4% to sawmills, 17.6% to plywood, and 18.0% to loggers. Distribution of BLM timber to sawmills was 33.5% to large Class A mills, 41.8% to large Class B mills, 17.6% to intermediate size Class C mills, and only 7% to small Class D mills. Here as in the Salem District we find most of the BLM timber being purchased by the big mills.

Table 3

Eugene BLM District's Contribution to Sawmill & Plywood Employment In Lane County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Simpson Tbr. Co.	Albany	17,944	1	192	See Linn County Data ---------------------				1[1]
R.R. Cedar Prod.	Cottage Grove	5,913	0	0	10,690	0	C	45	0
R&R Shingle Mfg.	Cottage Grove	5,913	0	0	n.a.	0	D	n.a.	0
W.W. Lbr. Co.	Cottage Grove	5,913	0	0	24,000	0	A	30	0
Weyerhaeuser Co.	Cottage Grove	5,913	0	0	68,140	0	A	230	0
Morrell Logging	Cottage Grove	5,913	9	3,378	n.a.	-	-	n.a.	17
Wilbur Nystrom	Cottage Grove	5,913	6	252	n.a.	-	-	n.a.	1
Weyerhaeuser Ply.	Cottage Grove	5,913	0	0	22,925		Ply	200	0
Total Cottage Grove			15	3,630	125,755	2.7		505	18
Letsom Bros.	Creswell	1,154	0	0	267	0	D	2	0
Brands Corp. Ply.	Creswell	1,154	1	4,005	17,193	23	Ply	150	35
Newman Lbr. & Log.	Creswell	1,154	0	0	1,850	0	D	9**	0
Total Creswell			1	4,005	19,310	20.7		161	35
Bohemia Lbr. Co.	Culp Creek	*	6	22,037	16,753-ply. 30,000-lbr.	47	B	296**	139
Elkside Lbr.	Culp Creek	*	0	0	n.a.	0	-	---	0
Total Culp Creek			6	22,037	46,753	47.1		296	139
Kimball Bros.	Dexter	*	0	0	14,500	0	B	73**	0
Willamette Ind.	Dallas	6,379	5	7,929	See Polk County Data ---------------------				12[1]
Coburg Veneer	Coburg	821	0	0	20,280	0	Veneer	177	0
Barker-Willamette	Eugene	77,284	9	30,239	n.a.	-	n.a.	n.a.	151
Bauman Lbr.	Eugene	77,284	0	0	1,850	0	D	9	0
Bethel Planing Co.	Eugene	77,284	0	0	(23,100)	0	B	83**	0
Cabax Ply.	Eugene	77,284	1	3,431	26,452	18	Ply	231**	42
Cascade Fiber Co.	Eugene	77,284	0	0	n.a.	0	n.a.	n.a.	0
Cascadian Co.	Eugene	77,284	0	0	4,070	0	D	23**	0
Central Mfg.	Eugene	77,284	0	0	8,520	0	C	12	0
Cubbeback Lbr.	Eugene	77,284	4	14,403	22,000	65	C	110	104
Douglas Fir Lbr.	Eugene	77,284	0	0	n.a.	0	n.a.	n.a.	0
Eugene Planing Mill	Eugene	77,284	0	0	n.a.	0	n.a.	70	0
Eugene Stud & Veneer	Eugene	77,284	3	156	47,613[3]	0.4	Veneer	415**	2

Table 31 (Cont.)

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual Wood Consumption mbf[4]	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Camac Veneer	Eugene	77,284	0	0	25,570[3]	0	Veneer	223**	0
Giustina Lbr. & Ply.	Eugene	77,284	3	1,892	23,807-Ply. 4,880-Lbr.	6.4	D	234**	15
Georgia Pac. Hdwd. Ply.	Eugene	77,284	0	0	32,623[3]	0	Ply	284**	0
Gregory Lbr.	Eugene	77,284	0	0	20,000	0	C	100**	0
Hardwoods Co., Inc.	Eugene	77,284	0	0	4,070[3]	0	D	35	0
Olympia Harbor Lbr.	Eugene	77,284	0	0	12,000	0	B	60**	0
Lane Plywood	Eugene	77,284	3	1,547	43,205	3.6	Ply	377	14
Seneca Sawmill	Eugene	77,284	4	15,126	54,000	28	A	68	19
Jones Veneer	Eugene	77,284	0	0	43,205	0	Veneer	377	0
Eugene Plywood	Eugene	77,284	0	0	32,624	0	Ply	284	0
Snellstrom Lbr. & Ply.	Eugene	77,284	0	0	22,925	0	Ply	200	0
U.S. Plywood	Eugene	77,284	0	0	20,280	0	Ply	177	0
Triangle Veneer	Eugene	77,284	0	0	8,817	0	Veneer	77	0
States Veneer	Eugene	77,284	0	0	11,462	0	Veneer	100	0
Savelich Log.	Eugene	77,284	6	7,325	n.a.	-	n.a.	n.a.	37
Star Lbr.	Eugene	77,284	1	1,348	24,400[3]	5	A	104**	6
Tangfeldt Lbr.	Eugene	77,284	0	0	n.a.	0	n.a.	n.a.	0
Willamette Valley Mft.	Eugene	77,284	0	0	14,000	0	C	40	0
Zip O Log Mills	Eugene	77,284	6	7,833	8,000[3]	97.9	C	50	27
Zip O Log Veneer	Eugene	77,284	0	0	26,452	0	Veneer	231	0
Total Eugene			40	83,300	542,826	14.4		4,162	417
Ply. Prod. Corp.	Dorena	*	0	0	21,162	0	Ply	185	0
Laduke Lbr.	Florence	2,193	0	0	20,280	0	Ply	177	0
Murphy Logging	Florence	2,193	4	8,333	n.a.	-	n.a.	n.a.	42
Total Florence			4	8,333	28,613	29.1		219	42
G. L. Brewer	Fall Creek	*	2	319	n.a.	-	n.a.	n.a.	2
Cone Lbr. Co.	Goshen	*	0	0	42,400	0	A	100	0
Goshen Veneer	Goshen	*	0	0	11,462	0	Veneer	100	0
Total Goshen			0	0	53,862	0		200	0
Clements Lbr.	Hendricks	*	0	0	n.a.	0	n.a.	n.a.	0
Hills Co. Lbr.	Jasper	*	0	0	18,000	0	B	65	0
American Can	Junction City	2,345	14	26,923	21,162	100	Ply	185	185
Muffet Log.	Junction City	2,345	2	378	n.a.	-	n.a.	n.a.	2
Hult Lbr. & Ply.	Junction City	2,345	0	0	15,871	0	Ply	138	0

Table 34 (Cont.)

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Jones Veneer	Junction City	2,345	0	0	15,871	0	Veneer	138	0
Larson, Clark & Powell	Junction City	2,340	0	0	15,000	0	B	50	0
Total Junction City			16	27,301	71,194	36.9		513	187
Hult Lbr. & Ply.	Horton	*	0	0	11,462	0	Ply	100	0
Davidson Ind.	Mapleton	*	0	0	40,000	0	A	125	0
U.S. Ply-Champion Lbr.	Mapleton	*	9	19,665	38,330	26	A	157	127
U.S. Ply-Champion Ply.	Mapleton	*			30,860		Ply	269	
Total Mapleton			9	19,665	111,190	16.0		551	127
Buehler Bros.	Noti	*	0	0	n.a.	0	n.a.	n.a.	0
Swanson Bros.	Noti	*	6	8,744	13,000	73	C	70	51
Pope & Talbot Lbr.	Oakridge	2,256	0	0	39,000	0	A	140	0
Pope & Talbot Ply.	Oakridge	2,256	0	0	22,043	0	Ply	192	0
Total Oakridge			0	0	61,043	0		332	0
Mazama Tbr.	Saginaw	*	1	2,893	n.a.	n.a.	n.a.	n.a.	11***
Bohemia Lbr.	Saginaw	*	0	0	56,000	0	B	224	0
Shipler Log	Salem	68,309	1	6,569	See Marion County Data				9^1
All American Stud.	Springfield	24,666	0	0	62,000	0	A	248	
Clear Fir Prod.	Springfield	24,666	0	0	n.a.	0	Pulpwood	n.a.	0
Gem Lbr.	Springfield	24,666	3	1,541	24,000	6.4	B	120	8
Georgia-Pac. Corp. Lbr.	Springfield	24,666	1	112	n.a.	-	n.a.	n.a.	1
Georgia-Pac. Ply. #1	Springfield	24,666	0	0	21,162	0	Ply	185	0
Georgia-Pac. Ply. #2	Springfield	24,666	0	0	42,324	0	Ply	369	
Huntington Shingle	Springfield	24,666	0	0	12,000	0	C	95	0
Mt. June Lbr.	Springfield	24,666	3	1,194	22,000	5.4	B	65	4
Koozer Bro. Log.	Springfield	24,666	5	2,457	n.a.	-	n.a.	n.a.	12
McCauley Bro. Log.	Springfield	24,666	7	4,215	n.a.	-	n.a.	n.a.	21
Oregon Cedar Prod.	Springfield	24,666	0	0	12,830	0	C	22	0
Phillips For. Prod.	Springfield	24,666	0	0	12,200	0	C	69	0
Pudmill & Moore	Springfield	24,666	1	4,468	n.a.	-	n.a.	n.a.	22
Murphy Log.	Springfield	24,666	2	1,840	n.a.	-	n.a.	n.a.	9
Rosboro Ply.	Springfield	24,666	4	6,223	22,043	7.0	Ply	192	32
Rosboro Lbr.	Springfield	24,666			66,000		A	268	
Willamette Ind.	Springfield	24,666	0	0	17,635	0	Ply	154	0

*** Coos Bay District sale

Table 31 (Cont.)

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Swanee Stud & Veneer	Springfield	24,666	0	0	6,500	0	C	37	0
Weyerhaeuser Ply.	Springfield	24,666	0	0	22,043	0	A	2,211	0
Weyerhaeuser Lbr.	Springfield	24,666	0	0	74,500				
Natron Ply.	Springfield	24,666	0	0	28,215	0	Ply	246	0
Vancouver Ply.	Springfield	24,666	0	0	28,215	0	Ply	246	0
Total Springfield			26	22,050	473,667	4.4		4,592	109
Erskine Lbr.	Swisshome	*	2	1,619	40,600	3.3	A	242	8
John Schurter	Salem	68,309	2	334	n.a.	-	n.a.	n.a.	2
International Paper	Vaughn	*	0	0	51,080	0	A	640	0
International Paper Ply.	Veneta	1,196	0	0	25,570	0	Ply	223	0
Blek Lbr.	Veneta	1,196	0	0	n.a.	0	n.a.	n.a.	0
Hines Lbr. Co.	Westfir	*	0	0	49,000	0	A	465	0
Davidson Ind.	West Lake	*	0	0	18,000	0	B	104**	0
Georgia-Pac. Ply.	Yarnell	*	0	0	23,807	0	Ply	208	0
Hines Ply.	West Fir	*	0	0	21,162	0	Ply	155	0
Larry Hegewald	Vancouver, WA		1	1,439	n.a.	-	n.a.	n.a.	2[1]
Total Lane County 97 mills			137	212,430	1,899,546	10.4		14,704 29/	1,528[5]

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.28/ 1 - Logging employment only. 2 - Class D daily production up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.3/ 4 - 1970 Directory of Forest Products Industry, 51st ed. 5. on a proportional basis re, BLM timber to total

n. Douglas County Dependency on BLM Timber in 1968, Roseburg District

Table 32 shows more towns in Douglas County are dependent on BLM stumpage than in any other Oregon county. These include all major towns in the county except Oakland and Dillard. It may have been that mills in these two towns had supplies of BLM stumpage purchased in previous years so did not buy stumpage at the high 1968 prices. Or it may be that some of these mills were supplied by logging firms which purchased BLM timber for resale of logs.

The town of Drain owes its economic well-being and employment opportunities to its wood products industries. In 1968 BLM timber supported from 55 to 60% of the jobs in Drain.

Elkton is a small sawmill town with nearly all job opportunities in this industry. Over 50% of its employment was supported by BLM timber sales in 1968.

Myrtle Creek with a population of 2,692 is one of the larger towns in Douglas County. Its economy seems to rest on the four big mills providing employment for about 460 people from a work force of around 714.* This indicates that the wood products industry supports 254 people in service industries, including education. The towns economy was found to be 25% dependent on BLM timber in 1968.

Riddle owes its existence to four mills which are about 42% dependent on BLM timber. The population of 1,043 indicates a work force of 277.* At least 200 of these are jobs in the wood products industry with only a low proportion in service type industries.

Although Roseburg is the county seat and the major trading area for the county, most of its jobs are in its mills and logging firms. The population of 13,902 had a work force of about 3,688.* The 3,180 people employed by the mills obviously include workers living in rural areas outside the town. Even so the economy of Douglas County's major city is from 20 to 25% dependent on BLM wood.

Sutherlin is the second largest town in Douglas County with a population of 3,058. Three big mills keep its economy going. From a labor force of 811* around 500 are dependent on wood products employment. BLM timber was found to provide jobs for approximately 20% of these, being of major importance to the economy.

The town of Winchester's economy comes mostly from its one big mill and three logging firms which in turn were 20% dependent on BLM timber in 1968. Countywide of all BLM sales to sawmills, 76.2% went to the big mills.

*Based on a state average of 1 covered employment worker per 3.77 population.30/

Table 32

Roseburg BLM District Contribution to Sawmill & Plywood Employment in Douglas Co. 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Moore Mill & Lbr.	Bandon	1,819	2	1,937	See Coos County Data ----------------------				2[1]
Coos Head Lbr.	Coos Bay	13,253	1	5,263	See Coos County Data ----------------------				7[1]
Continental Const.	Corvallis	34,798	1	5,746	See Benton County Data --------------------				8[1]
South F.K. Lbr. Co.	Anlauf	*	0	0	5,200	0	D	20**	0
Douglas Fir Ply. Co.	Dixonville	*	3	2,396	46,900	5.1	Veneer	235**	12
P. B. Hult Lbr.	Dillard	*	3	7,330	66,000	11	A	170	19
Douglas Fir Ply.	Dillard	*	0	0	n.a.	0	Pulpwood	n.a.	0
Miles Feero	Dillard	*	0	0	1,550	0	D	8**	0
Forrest Industries	Dillard	*	0	0	n.a.	0	Pulpwood	n.a.	0
Roseburg Lbr. Co.	Dillard	*	0	0	140,000	0	A	1,500	0
Roseburg Lbr. #1 Ply.	Dillard	*	0	0	41,020	0	Ply		
Roseburg Lbr. #2 Ply.	Dillard	*	0	0	58,610	0	Ply		
Round Prairie Lbr.	Dillard	*	0	0	9,310	0	B	47**	0
Total Dillard			3	7,330	316,490	2.3		1,725	19
Smith River Lbr.	Drain	1,212	0	0	17,320	0	A	87**	0
Drain Plywood	Drain	1,212	1	9,971	29,300	34	Ply	234**	87
Reedsport Timber	Drain	1,212	6	9,143	n.a.	n.a.	Log.	n.a.	46
Woolley Log	Drain	1,212	18	39,369	n.a.	-	n.a.	n.a.	157**
Mt. Baldy Lbr.	Drain	1,212	4	1,058	n.a.	-	n.a.	n.a.	5
Total Drain			29	50,398	88,105	57.2		321	295
Lucas Lbr.	Elkton	153	0	0	2,590	0	D	13**	0
Doug. Fir Log	Elkton	153	9	12,863	n.a.	-	n.a.	n.a.	51**
Total Elkton			9	12,863	15,453	74.3		73	51
Seneca Sawmill	Eugene	77,284	1	927	See Lane County Data ----------------------				2[1]
International Paper	Gardiner	*	3	4,408	44,702	5.4	B	900	49
International Paper-Ply	Gardiner	*			37,120		Ply		

Table 32 (Cont.)

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual^4 Wood Consumption mbf	% BLM Timber	Size Class Mill^2	Employment^4	Employment Credit BLM
Rbt. Dollar - Lbr.	Glendale	795	16	27,477	16,600	35	A	420	147
Rbt. Dollar - Ply.	Glendale	795			46,900		Ply		
Glendale Ply	Glendale	795	0	0	28,130	0	Ply	225	0
Superior Lbr.	Glendale	795	10	14,484	10,680	100	C	31	31
Fred J. Kafer	Glendale	795	0	0	n.a.	0	n.a.	n.a.	0
Schmidt Lbr. Co.	Glendale	795	0	0	6,000	0	C	30**	0
Pol Logging	Glendale	795	12	1,115	n.a.	-	n.a.	n.a.	6
Total Glendale				43,076	108,370	42.7		706	184
U. S. Plywood	Mapleton	*	3	6,230	See Lane County Data				9^1
Umpqua Plywood	Myrtle Creek	2,692	0	0	32,820	0	Ply	263**	0
Birkenfeld & Son	Myrtle Creek	2,692	3	10,120	n.a.	-	n.a.	51	51
Green Valley Lbr.	Myrtle Creek	2,692	2	6,558	n.a.	-	n.a.	33	33
Fibreboard Corp.	Myrtle Creek	2,692	0	0	33,320	0	A	110	0
Total Myrtle Creek				16,678	66,140	25.2		457	84
South. Ore. Ply.	Grants Pass	12,484	1	330	See Josephine County Data				1
Rbt. Monett	Oakland	1,012	1	130	n.a.	-	n.a.	n.a.	1
C&D Lbr. Co.	Riddle	1,043	9	18,909	41,500	45.6	A	95	43
D.R. Johnson Lbr.	Riddle	1,043	4	5,364	5,180	100	C	26**	26
Herbert Lbr.	Riddle	1,043	0	0	5,180	0	C	43	0
Dillard Veneer	Riddle	1,043	0	0	6,250	0	Veneer	44	0
Total Riddle				24,273	58,110	41.8		208	69
John Bell Log.	Roseburg	13,902	1	1,955	n.a.	-	n.a.	n.a.	10
C&D Lbr. Co.	Roseburg	13,902	0	0	n.a.	0	n.a.	n.a.	0
John Barron	Roseburg	13,902	19	697	n.a.	n.a.	n.a.	n.a.	3
Wm. Barron	Roseburg	13,902	5	149	n.a.	n.a.	n.a.	n.a.	1
Patricia Barron	Roseburg	13,902	3	175	n.a.	n.a.	n.a.	n.a.	1
Arthur Koch	Roseburg	13,902	4	206	n.a.	n.a.	n.a.	n.a.	1
Magness Log	Roseburg	13,902	2	136	n.a.	n.a.	n.a.	n.a.	1
Douglas Co. Lbr.	Roseburg	13,902	9	21,627	n.a.	n.a.	n.a.	n.a.	108
Douglas Fir Ply.	Roseburg	13,902	0	0	n.a.	n.a.	Pulpwood	n.a.	0
Hub Lbr.	Roseburg	13,902	0	0	11,640	0	B	45	0
Keller Lbr.	Roseburg	13,902	0	0	19,000	0	C	30	0
Winchester Ply.	Roseburg	13,902	4	586	27,350^3	2.1	Ply	219**	5

Table 32 (Cont.)

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Roseburg Lbr. Co.	Roseburg	13,902	16	28,739	50,000	27	A	1,640	443
Roseburg Lbr. Ply #3	Roseburg	13,902			32,820		Ply		
Roseburg Lbr. Ply #4	Roseburg	13,902			23,440		Ply		
Sun Studs Lbr.	Roseburg	13,902	8	20,092	36,000	20	A	195	151
Sun Studs Veneer	Roseburg	13,902			64,470		Veneer	451**	
U.S. Ply-Champion	Roseburg	13,902	4	8,041	19,730	9.3	A	99**	57
U.S. Ply-Champ. Ply	Roseburg	13,902			48,840		Ply	391**	
Roseburg Shingle	Roseburg	13,902	0	0	3,100	0	D	41	0
A. F. Saar, Inc.	Roseburg	13,902	0	0	n.a.	0	n.a.	n.a.	0
Total Roseburg				82,603	336,390	24.6		3,180	781
L&H Lbr. Co.	Sutherlin	3,058	0	0	30,000	0	A	120	0
Nordic Veneers	Sutherlin	3,058	6	20,298	20,710	43	Ply	375	161
Nordic Ply.	Sutherlin	3,058			46,880				
Total Sutherlin				20,298	97,590	20.8		495	161
Deady Lbr.	Wilbur	*	0	0	n.a.	-	n.a.	n.a.	0
Douglas Co. Lbr.	Winchester	*	0	0	22,900[3]	0	B	200	0
Skeels Log	Winchester	*	4	5,868	n.a.	-	n.a.	n.a.	29
Total Winchester				5,868	28,768	20.4		229	29
Mt. Baldy Lbr.	Yoncalla	640	0	0	9,320[3]	0	B	44	0
Pfeiffer Lbr.	Yoncalla	640	0	0	n.a.	0	n.a.	n.a.	0
Total Yoncalla				0	9,320	0		44	0
Total Roseburg District	57 mills			289,497	1,258,658	20.6			

Medford BLM District Timber Sales in Douglas County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Glendale Stud	Glendale	795	6	297	n.a.	-	n.a.	n.a.	2

Table 32 (Cont.)

Coos Bay BLM District Contribution to Sawmill & Plywood Employment In Douglas County, 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
J. D. Huffman Log.	Cheshire	*	1	2,223	n.a.	-	n.a.	n.a.	11
Douglas Fir Ply.	Coquille	4,284	2	2,845	See Coos County Data ----------------------				4[1]
Coos Head Tbr.	Coos Bay	13,253	4	6,298	See Coos County Data ----------------------				9[1]
Reedsport Tbr.	Drain	1,212	6	9,143	n.a.	-	n.a.	n.a.	46
Seneca Sawmill	Eugene	77,284	1	8,210	See Lane County Data ----------------------				12[1]
Barker Willamette	Eugene	77,284	2	10,476	See Lane County Data ----------------------				15[1]
U.S. Plywood	Eugene	77,284	5	13,430	See Lane County Data ----------------------				19[1]
International Paper	Gardiner	*	3	4,408	See Roseburg District Data ----------------				
Elkside Lbr.	Lakeside	*	5	5,411	See Coos County Data ----------------------				8[1]
Douglas Co. Lbr.	Roseburg	13,902	2	13,610	n.a.	-	n.a.	n.a.	53
Swanson Bros. Log.	Noti	*	1	560	See Lane County Data ----------------------				1[1]
Murphy Logging	Springfield	24,666	2	1,840	See Lane County Data ----------------------				2[1]
Erskine Lbr.	Swisshome	*	2	1,619	See Lane County Data ----------------------				2[1]
Total Coos Bay District				80,073	29,384				182
Total Douglas County				369,867	1,288,339	25.9		9,076	1,902

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.28/ 1 - Logging employment only 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service study.3/ 4 - 1970 Directory Forest Products Industry, 51st ed.

o. Coos County Dependency on BLM Timber in 1968, Coos Bay District

Table 33 shows only two small towns in Coos County were highly dependent on BLM timber to sustain their economy in 1968, these being Bandon and Myrtle Point. Even though there are a great many small mills in the county, the big mills were the ones buying the BLM timber. This may have been due to the fact that the larger integrated mills could make more efficient and complete use of the wood, enabling them to outbid the small operators. Continued existence of the small mills is apparently not dependent on BLM timber. The economy of Myrtle Point was nearly 50% dependent on BLM stumpage, that of Bandon 27% dependent, Lakeside and Coos Bay both over 10% dependent.

Table 33

Coos Bay BLM District Contribution to Sawmill & Plywood Employment in Coos County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Moore Mill & Lbr.	Bandon	1,819	7	28,199	42,500	66	B	213**	141
Perry Bros. Veneer	Bandon	1,819	0	0	11,500	0	Veneer	100**	0
Rogge Lbr.	Bandon	1,819	0	0	50,400	0	A	252	0
Total Bandon			7	28,199	104,400	27.0		565	141
Cape Arago Lbr.	Coos Bay	13,253	0	0	52,700	0	A	160	0
Coos Head Tbr.-Lbr.	Coos Bay	13,253	16	36,027	69,500	31	A	348**	202
Coos Head Tbr.,McKenna	Coos Bay	13,253			28,200		D	141**	
Coos Head Tbr. Ply.	Coos Bay	13,253			18,424		Ply	161**	
Georgia Pacific Hdbd.	Coos Bay	13,253	0	0	n.a.	0	-	n.a.	0
Georgia Pac. Ply.	Coos Bay	13,253	0	0	66,326	.0	Ply	578**	0
Geo.Pac. Veneer(Norway)	Coos Bay	13,253					Veneer		
Douglas Fir Ply #1	Coos Bay	13,253	0	0	50,666	0	Ply	442**	0
Douglas Fir Ply #2	Coos Bay	13,253	0	0	31,781	0	Ply	277**	
Douglas Fir Ply Hdwd.	Coos Bay	13,253	0	0	11,515	0	Ply	101**	0
Hardwood Ply.	Coos Bay	13,253	0	0	11,974	0	Ply	105**	0
Pierce Lbr. Co.	Coos Bay	13,253	0	0	56,000	0	B	105	0
Sawmill By Products	Coos Bay	13,253	0	0	n.a.	n.a.	n.a.	n.a.	0
Total Coos Bay			16	36,027	344,391	10.5		2,258	202
Georgia Pac. Lbr.	Coquille	4,284	0	0	20,000	0	D	100	0
Georgia Pac. Ply.	Coquille	4,284	0	0	82,908	0	Ply	723	0
Georgia Pac. Veneer(Powers)	"	4,284	0	0					
Total Coquille					102,908	0		823	0
Live Bros. Lbr.	Four Mile	*	0	0	5,340	0	D	27**	0
Elkside Lbr. Co.	Lakeside	*	5	5,411	51,000	10.6	B	255	27
G.C. Gould Lbr.	North Bend	8,442	0	0	n.a.	0	n.a.	n.a.	0
Hollow Stump Shingles	North Bend	8,442	0	0	n.a.	0	n.a.	n.a.	0
Weyerhaeuser Co. Lbr.	North Bend	8,442	2	1,170	100,800	0.5	A	504	0
Weyerhaeuser Co. Ply.	North Bend	8,442			82,908		Ply	723	62
A.W. Sweet	North Bend	8,442	1	392	n.a.	-	n.a.	n.a.	2
Total North Bend			8	6,973	240,048	2.9		1,509	91

Table 33 (Cont.)

Mill or Purchaser	Location	Popul-ation	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employ-ment[4]	Employment Credit BLM
Doyle Milling	Myrtle Point	2,495	1	13,466	n.a.	-	n.a.	n.a.	67
Gordon Hayes	Myrtle Point	2,495	3	106	n.a.	-	n.a.	n.a.	1
Collier Lbr.	Myrtle Point	2,495	0	0	n.a.	-	n.a.	n.a.	0
Leep Logging Corp.	Myrtle Point	2,495	0	0	14,000	-	C	70	0
V&W Lbr.	Myrtle Point	2,495	0	0	n.a.	-	n.a.	n.a.	0
Total Myrtle Point			4	13,572	27,572	49.2		138	68
Oliner Flood	Powers	1,140	1	100	n.a.	-	n.a.	n.a.	1
W.R. Merchen	Powers	1,140	1	79	n.a.	-	n.a.	n.a.	1
Fred Stuck	Powers	1,140	2	97	n.a.	-	n.a.	n.a.	1
Tom Flood	Powers	1,140	3	205	n.a.	-	n.a.	n.a.	1
Kenneth Smith	Powers	1,140	1	154	n.a.	-	n.a.	n.a.	1
Roy Hofsess	Powers	1,140	3	204	n.a.	-	n.a.	n.a.	1
J.R. Pearson	Powers	1,140	5	311	n.a.	-	n.a.	n.a.	2
Ray Pearson	Powers	1,140	1	134	n.a.	-	n.a.	n.a.	1
Total Powers			17	1,284	n.a.	-			9
Mazama Tbr.	Saginaw	*	1	2,893	See Lane County Data -----------			n.a.	4[1]
Pudmill & Moore	Springfield	24,666	1	4,468	See Lane County Data -----------				6[1]
Douglas Co. Lbr.	Roseburg	13,902	1	11,507	See Douglas County Data --------				16[1]
Total Coos County 37 mills			55	104,923	583,976	18.0		5,225	537

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lumber and 8.72 workers per 1 mm bd. ft. plywood.[28] 1 - Logging employment only 2 - Class D up to 40 mbf/day production, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.[3] 4 - 1970 Directory for Prod. Industry.

p. Curry County Dependency on BLM Timber in 1968, Coos Bay District

Table 34 shows very little BLM timber sold in Curry County in 1968. BLM sales prior to 1968 made available BLM stumpage sufficient to supply nearly 10% of the wood processed in the county in 1968. On this basis BLM wood provided about 10% of the wood products employment in the county.

Table 34

BLM Coos Bay District Contribution to Sawmill & Plywood Employment in Curry County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Agnew Tbr.	Brookings	2,630	2	285	n.a.	-	n.a.	n.a.	2
Brookings Ply-Lbr.	Brookings	2,630	0	0	30,240	0	A	42	0
Brookings Ply Corp	Brookings	2,630	0	0	41,490	0	Ply	362	0
South Coast Lbr.	Brookings	2,630	1	579	32,760	1.8	A	200	4
Tan Oak Ind.	Brookings	2,630	0	0	n.a.	0	n.a.	13	0
Total Brookings			3	864	104,490	0.8		617	6
Fred Smith	Gold Beach	1,515	1	100	n.a.	0	n.a.	n.a.	1
U.S. Ply-Champion Lbr.	Gold Beach	1,515	0	0	40,320	0	A	202	0
U.S. Ply-Champion Ply.	Gold Beach	1,515	0	0	37,235	0	Ply	325	0
Total Gold Beach			1	100	77,555	0.1		527	1
R.D. Tucker Sawmill	Langlois	*	0	0	3,500	0	D	8	0
Western States Ply.	Port Orford	1,014	0	0	27,660	0	Ply	241	0
Total Curry County	10		4	964	250,502[3]	0.4		1,393	7
Total Coos Bay District			59	105,887	1,066,915[3]	9.9		6,618	544

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. sawmill and 8.72 for plywood.28/ 1 - Logging employment only.
2 - Class D up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.3/ 4 - 1970 Directory Forest Prod. Industry.

q. Josephine County Dependency on BLM Timber in 1968, Medford District

BLM timber sales in 1968 were of vital importance to the economic well-being of three out of the twelve towns in Josephine County. Table 35 shows BLM timber sold totalled 47.9% of the total wood processed in the county. This provided jobs for 629 people, 9.7% of the total labor force. BLM stumpage virtually supported the town of Cave Junction, population 330, being 72.9% of the total wood used and providing 32 jobs out of the 43 in this industry. BLM timber sales to mills in Grants Pass equaled 42.8% of all wood used, providing a proportionate amount of the employment in this industry. Based on the state averages*, total work force in Grants Pass would have been 3,311 people for which BLM timber provides direct employment for about 13.4%.

Merlin has less than 500 population and is supported by 4 wood processing plants. BLM 1968 timber sales comprised 92% of known timber consumed and 92% of the local employment.

Of all BLM stumpage sold to sawmills, 87.2% went to the big Class A and B mills. From total BLM sales only 50.5% went to sawmills, 42.9% to plywood mills and 6.6% to loggers.

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*State average equals one person under covered employment per 3.77 population.[30]

Table 3~~5~~

BLM Medford District Contribution to Sawmill & Plywood Employment In Josephine County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
Rough & Ready Lbr.	Cave Junction	330	3	6,204	8,640	71.8	C	48	31
W.M. Farmer	Cave Junction	330	1	95	n.a.	-	n.a.	n.a.	1
Total Cave Junction			4	6,299	8,640	72.9		43	32
Agee & Beck	Grants Pass	12,484	1	141	n.a.	-	n.a.	n.a.	1
Brown Bros. Lbr.	Grants Pass	12,484	7	5,100	16,000	31.9	B	38	12
Cabax Mills	" (& Kerby)	12,484	12	4,103	21,885	18.7	A	180	31
K.C. Log	Grants Pass	12,484	3	511	n.a.	-	n.a.	n.a.	3
F. Higginbotham	Grants Pass	12,484	9	2,504	n.a.	-	n.a.	n.a.	13
Mt. Fir Lbr.	Grants Pass	12,484	19	9,531	34,550	27.6	A	173	48
Earnest Mignot	Grants Pass	12,484	2	106	n.a.	-	n.a.	n.a.	1
Ed C. Smith	Grants Pass	12,484	5	3,667	n.a.	-	n.a.	n.a.	18
So. Oregon Ply	Grants Pass	12,484	38	47,238	24,000	100	Ply	280	280
Spalding & Son	Grants Pass	12,484	15	6,903	18,855	33.3	B	94	36
S.H.&W Lbr.	Grants Pass	12,484	0	0	33,700	0	A	54	0
Raymond Self	Grants Pass	12,484	3	79	n.a.	n.a.	n.a.	n.a.	1
Tunnel Co. Mill	Grants Pass	12,484	0	0	n.a.	0	n.a.	n.a.	0
Agnew Ply.	Grants Pass	12,484	0	0	5,424	0	Ply	47	0
Crater Ply.	Grants Pass	12,484	0	0	10,540	0	Ply	92	0
Vancouver Ply.	Grants Pass	12,484	0	0	14,088	0	Ply	123	0
Total Grants Pass			114	79,883	179,042	42.8		1,118	444
Bate Ply Inc., Lbr.	Merlin	*	22	22,865	14,860	100	C	77	77
Bate Plywood	Merlin	*			8,005	100	Ply	70	70
Eugene Potts Lbr.	Merlin	*	0	0	n.a.	n.a.	n.a.	n.a.	0
Merlin For. Prod.	Merlin	*	0	0	1,985	0	Ply	17	0
Total Merlin			22	22,865	24,850	92.0		164	147
Raymond Frost	Selma	*	2	97	n.a.	n.a.	n.a.	n.a.	1
M&Y Lbr. Co.	Selma	*	6	889	3,930	14	D	20	4
Total Selma			8	987	3,930	25.1		20	5
C.C. Corwin	Talent	1,346	7	161	n.a.	-	n.a.	n.a.	1
K.O. Reedy Lbr.	Wolf Creek	*	0	0	n.a.	0	n.a.	n.a.	0
Trufir Lbr. Co.	Wolf Creek	*	0	0	9,720	0	C	49	0
Tunnel Co. Mill	Wolf Creek	*	0	0	3,930	0	D	20	0
Total Wolf Creek			0	0	13,650	0		104	0
Total Josephine County 15			155	110,195	230,112	47.9		1,906[5]	629 9.7%

*Less than 500 population. **Based on 5 workers per 1 mm bd. ft. lbr and 8.72 per 1 mm bd. ft. plywood.[28] 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf per day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service Study.[3] 4 - 1970 Directory Forest Products Industry. 5 - Oregon Covered Employment & Payrolls 1968, Oregon.

r. Dependency of Jackson County Mills on 1968 BLM Timber Sales, Medford District

Table 36 shows that 24% of Jackson County's wood products industry is dependent on BLM timber. Of the 8 plywood plants in the county, only 4 bought BLM sales directly. However 14 out of the 24 sales went to loggers who in turn may have supplied logs to the plywood plants. Purchases by sawmills was limited to the big mills in the county. Of all the towns in the county, the economy of only 3 were highly dependent on BLM stumpage. These include Ashland with a population of 12,280 and a wood products industry nearly 50% dependent on BLM timber. Ashland has a work force of about 3,257 people.* A great many are employed by Southern Oregon College of Education so the town's economy is not dominated by the lumber industry. Nor is the continued availability of BLM timber of major economic importance.

The town of central Point with a population of 3,905 had a lumber industry 19% dependent on BLM stumpage. Its work force of 1,036 were nearly all dependent on the lumber industry and BLM timber supplied a vital part of the operation of its 3 major mills.

Medford is the county seat and is the major shopping and service area for this part of the state. It has a work force of about 7,400* people of which about 2,608 or 35% were employed in wood processing. BLM timber directly supported about 10% of the total work force as well as at least this many again in service type industries. On a county wide basis the ratio of basic to service industries is 1 to 2.1. There were 5,172 workers in the wood products industry in Jackson County in 1968. BLM provided 24.2% of the raw material for this industry so may be said to have provided jobs for 1,252 of these workers, being 6.4% of the total labor force. These in turn supported 2,629 jobs in service industries. This equals 3,881 workers dependent on BLM timber in Jackson County, 19.7% of total employment.

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*Based on a state average of 1 worker in covered employment to 3.77 people.[30]

Table 36

BLM Medford District Contribution to Sawmill & Plywood Employment in Jackson County 1968

Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual^4 Wood Consumption mbf	% BLM Timber	Size Class Mill^2	Employment^4	Employment Credit BLM
Continental Constr.	Ashland	12,280	1	295	n.a.	-	n.a.	n.a.	2
Stanley Cook	Ashland	12,280	5	1,282	n.a.	-	n.a.	n.a.	6
Neil Baird	Ashland	12,280	1	142	n.a.	-	n.a.	n.a.	1
McGrew Sawmill	Ashland	12,280	6	19,486	44,000	44.3	B	40	18
Parsons Pine	Ashland	12,280	0	0	n.a.	0	n.a.	n.a.	0
Total Ashland			13	21,205	44,000	48.2		49	27
Cheney For. Prod.	Central Point	3,905	6	6,953	16,810	41.3	A	84	35
Double D Lbr.	Central Point	3,905	12	5,742	23,530	24.4	A	118**	32
Mt. Pitt Co.	Central Point	3,905	0	0	n.a.	0	n.a.	n.a.	0
Tolo Cedar Mills	Central Point	3,905	0	0	11,500	0	C	48	0
Steve Wilson Co.	Central Point	3,905	5	14,395	90,400	15.9	A	265	42
Total Central Point			23	27,090	142,240	19.0		515	109
Duane Burton	Butte Falls	400	8	920	n.a.	n.a.	n.a.	n.a.	2
R.C. Logging	Eagle Point	1,205	1	489	n.a.	n.a.	n.a.	n.a.	3
Pol Logging	Glendale	795	6	787	n.a.	n.a.	n.a.	n.a.	2^1
Geo. E. Foster	Grants Pass	12,484	3	79	See Josephine County data ----------------				1^1
Mt. Fir Lbr.	Grants Pass	12,484	18	9,528	See Josephine County data ----------------				14^1
Raymond Self	Grants Pass	12,484	3	79	See Josephine County data ----------------				1^1
Ed C. Smith	Grants Pass	12,484	3	3,581	See Josephine County data ----------------				5^1
So. Ore. Ply.	Grants Pass	12,484	14	22,771	See Josephine County data ----------------				28^1
Total Grants Pass			56	36,038	(n.a.)				56
Boise Cascade Lbr.	Medford	27,950	12	3,034	13,625	4.2	B	68	24
Boise Cascade Ply.	Medford	27,950			57,818		Ply	504	
Continental Tbr.	Medford	27,950	1	3,716	n.a.	n.a.	n.a.	n.a.	18
Jerry Lkimek	Medford	27,950	7	634	n.a.	n.a.	n.a.	n.a.	3
KOGAP Ply.	Medford	27,950	9	38,554	43,123	89.4	Ply	376	336
Carolina Pac.	Medford	27,950	0	0	33,882	0	Ply	295	0
Medford Corp. Lbr.	Medford	27,950	18	31,215	75,300	31.7	A	384**	186
Medford Corp. Ply	Medford	27,950			23,100		Ply	202	
T.W. McFadden	Medford	27,950	1	356	n.a.	n.a.	n.a.	n.a.	2
Plumley Inc.	Medford	27,950	5	1,275	n.a.	n.a.	n.a.	n.a.	6**

Table 36 (Cont.)

Mill or Purchaser	Location	Popul-ation	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employ-ment[4]	Employment Credit BLM
Timber Products	Medford	27,950	22	16,327	24,257	67.3	Ply	212	143
McGrew Bros.	Medford	27,950	0	0	24,200	0	A	121	0
Medford Ven. & Ply.	Medford	27,950	0	0	23,100	0	Ply	201	0
Rogue Valley Ply.	Medford	27,950	0	0	28,107	0	Ply	245	
Total Medford			75	95,111	346,512	27.4		2,608	718
D.R. Johnson	Riddle	1,043	3	62	See Douglas County Data ------------------				1
Gilensky Log.	Rogue River	657	2	321	n.a.	n.a.	n.a.	n.a.	2
Georgia Pacific	Rogue River	657	0	0	31,572	0	Veneer	275	0
M&Y Lbr.	Selma	*	1	241	See Josephine County Data ----------------				1[1]
C.C. Corvin	Talent	1,346	4	4,308	n.a.	n.a.	n.a.	n.a.	21
Table Rock Lbr.	Tolo	*	0	0	20,170	0	A	101	0
E.F. Burrill Lbr.	White City	*	0	0	10,590	0	B	53	0
Delah Tbr. Prod	White City	*	0	0	45,200	0	A	231	0
Fir Ply.	White City	*	0	0	42,235	0	Ply	369	0
Forest Ind., Inc.	White City	*	0	0	n.a.	0	Pulpwood	n.a.	0
Lawyer Lbr., Inc.	White City	*	0	0	27,160	0	A	136	0
Lawyer Veneer	White City	*	0	0	30,417	0	Ply	265	0
So. Ore. Dry Kiln	White City	*	0	0	n.a.	0	n.a.	21	0
Steve Wilson	White City	*	0	0	6,880	0	C	35	0
White City Ply.	White City	*	0	0	24,642	0	Ply	215	0
Leo Hoag	White City	*	1	108	n.a.	n.a.	n.a.	n.a.	1
Total White City			1	108	187,124	0.05		1,325	1
Total Jackson County	41		193	186,680	771,618	24.2		5,172[5]	918

BLM Medford District Contribution to Sawmill & Plywood Employment in Klamath County 1968

Mill or Purchaser	Location	Popul-ation	No. BLM Sales	BLM Tbr. Bought mbf	Annual Wood Consumption mbf	% BLM Timber	Size Class Mill	Employ-ment	Employment Credit BLM
McGrew Bros.	Ashland	12,280	6	19,486	See Jackson County Data ------------------				27[1]
Duane Burton	Butte Falls	400	2	360	See Jackson County Data ------------------				1[1]
Modoc Lbr.	Klamath Falls	15,305	3	169	81,125	-	A	150	1
Klamath Ply.	Klamath Falls	15,305	2	72.5	n.a.	-	Ply	n.a.	1

*Less than 500 population. **Based on 5 workers per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.[28/] 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Computed from Forest Service study.[3/] 4 - 1970 Directory Forest Products Industry. 5 - Oregon Covered Employment & Payrolls 1968, Oregon Employ. Div. 1969.

s. Dependency of Klamath County Mills on BLM Timber in 1968 (Klamath County is partly in the Lakeview District)

There were a total of 12,019 workers under covered employment in Klamath County in 1968. Ratio of basic industry to service industry workers was 1 to 2. In spite of the large amount of intensive irrigated agriculture around Klamath Falls, lumber and wood products employment is 86% of total basic industry employment. On the other hand wood products employment was only 31.5% of total employment.

Both the Medford and Lakeview BLM Districts sell timber which goes to mills in Klamath County. Of the total 1968 timber harvest in the county, BLM provided only 5.1%, providing employment for about 193 workers in basic industry plus 386 workers in service type industries. This equals only 4.7% of total employment in the county.

Wood products exports in 1968 totalled $66.8 million compared to only $12 million in agriculture. Lumber sector purchases more goods and services than any other sector for a total of $28,122,440 including wage payments compared to agriculture purchases of only $15,985,183.[31] Lumber and agriculture provides the base upon which the remainder of the economy rests.

t. Economic Dependency of Eastern Oregon Mills on BLM Timber, Baker District, 1968

(1) Baker County Dependency on BLM Timber in Baker District

Total 1968 covered employment in Baker County was 3,542. Ratio of basic to service industry was 1 to 2.6. Wood products employment of 580 was only 16.4% of the total. Baker is somewhat isolated from other towns and is bisected by Hwy. U. S. 80 North, the main east-west arterial through Oregon. Thus the recreation and tourist industry helps account for the high ratio of service industry. The town of Baker is the primary tourist stop in the County.

There are 3 small sawmills, one planing mill, and one plywood mill in the county as shown in Table 37. There are 2 mills in Baker, and one each at Halfway, Sumpter, and Unity. The Ellingson Mill at Baker bought all the BLM timber that was sold in 1968. Baker with population of 9,235 had a work force of about 2,450.* The 25 jobs provided by BLM timber was only 1% of the work force. Based on 1968 data, except for its value as a recreation and tourist attraction, BLM timber had little impact on the economy of either the county or any of the towns therein.

(2) Dependency of Umatilla County Mills on BLM Timber, Baker District, 1968

Total 1968 covered employment in Umatilla County was 12,470. Ratio of basic to service industry was 1 to 2.4. The high numbers in the service type industries reflect the fact that Pendleton is the major trading center for many of the surrounding counties. Wood products employment of 569 was only 4.6% of total employment.

There are 3 large mills and one small mill, a plywood plant and a hardboard plant in the county. There were no BLM timber sales in the county in 1968. BLM timber comprised only 0.2% of the 1968 harvest and had practically no impact on the economy.

(3) Dependency of Union County Mills on BLM Timber, Baker District, 1968

Total 1968 covered employment in Union County was 3,894. Ratio of basic to service industries was 1 to 1.9. The town of LaGrande lies on Hwy. 80 N and supports an important tourist industry. Wood products employment was 1,184, 30.4% of total employment. Table 37 shows there were 3 large sawmills and one small mill in the county plus a plywood mill and a hardboard mill. The one BLM timber sale was bought by the large Class A mill at La Grande. The amount of BLM timber was too small to have an impact on either Union County or the town of La Grande.

(4) Dependency of Wallowa County Mills on BLM Timber, Baker District, 1968

Total 1968 covered employment in Wallowa County was 1,179. Ratio of basic to service industries was 1 to 3.3. The largest town is Enterprise, population 1,652. La Grande in Union County is the major trading area for Wallowa County. Obviously service in the field of recreation provides a major proportion of the employment in the county.

Table 37 shows there were one big mill and three small mills in the county. The large Class B mill at Joseph bought the small amount of BLM timber sold in 1968. Wood products employment totalled 282, 24% of the total workers. BLM timber used was only 1.4% of the total, accounting for only four jobs.

(5) Dependency of Morrow County Mills on BLM Timber in 1968

Total 1968 covered employment in Morrow County was 639. Wood products employment was 168, 26.3% of the total. Ratio of basic to service industry was 1 to 3.3, reflecting a lack of covered employment in any basic industry other than wood products. Although there is a great deal of summer employment in agriculture, such does not come under the "covered employment" category. There are two sawmills at Heppner. Neither used any appreciable amount of BLM timber. BLM stumpage made no impact on the county's economy.

Table 37

BLM Baker District Contribution to Sawmill & Plywood Employment in Eastern Oregon, 1968

	Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment[4]	Employment Credit BLM
BAKER COUNTY	Ellingson Lbr.	Baker	9,235	0	0	n.a.	0	Planing	50	0
	Ellingson Tbr. Ply	Baker	9,235	3	2,874	36,000	8.0	Ply	314	25
	Total City of Baker			3	2,874	36,000	8.0		364	25
	Ellingson Lbr.	Halfway	467	0	0	n.a.	0	D	19	0
	4M Lbr. Co.	Sumpter	96	0	0	n.a.	0	n.a.	n.a.	0
	Ellingson	Unity	*	0	0	17,290	0	C	25	
	Total Baker County			3	2,874	102,020 3/	4.4		408	25
UMATILLA COUNTY	EML Lbr. Co.	Athena	960	0	0	14,820	0	C	77	0
	Ore.-Wash. Ply-Lbr.	Athena	960	0	0	23,352	0	B	55	0
	Harris Pine	Pendleton	13,063	0	0	19,440	0	B	101	0
	Georgia Pacific	Pilot Rock	1,597	0	0	52,000	0	B *	225	0
	U.S. Gypsum	Pilot Rock	1,597	0	0	n.a.	0	Pulpwood	n.a.	0
	U.S. Gypsum	Pilot Rock	1,597	0	0	n.a.	0	Insulation & Hdbd.	n.a.	0
	Total Umatilla County			0	0	109,612	0		524[5]	
UNION COUNTY	Boise-Cascade	Elgin	1,381	0	0	31,850	0	A	96	0
	Boise-Cascade Ply	Elgin	1,381	0	0	61,000	0	Ply	532	0
	Peacock Lbr.	Alicel	*	0	0	n.a.	0	n.a.	n.a.	0
	Boise-Cascade Lbr.	La Grande	9,699	1	790	63,700	1.2	A	240	3
	Ronde Valley Lbr.	Union	1,515	0	0	20,655	0	B	107	0
	Alfred Slemp	Union	1,515	0	0	940	0	D	5	0
	Boise-Cascade	La Grande	9,699	0	0	n.a.	0	Board	n.a.	0
	Total Union County			1	790	212,088 3/	0.4		1,095[5]	3
WALLOWA COUNTY	Boise-Cascade	Joseph	760	2	77.5	41,000	0	B	213	0
	Evergreen Mills	Joseph	760	0	0	n.a.	0	n.a.	n.a.	0
	Starner Lbr. Co.	Lostine	212	0	0	1,410	0	D	4	
	Victor & Sons	Wallowa	800	0	0	1,410	0	D	4	0
	Total Wallowa County			2	77.5	43,820			221	
MORROW COUNTY	Heppner Lbr.	Heppner	1,388	1	43	24,000	-	B	53	0
	Kinzua Corp.	Heppner	1,388	0	0	13,585	0	C	60	0
	Total Morrow County			1	43	37.585	0		168	0
	Total Baker District			7	3,784.5	505,125	0.9		2,416	25

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per mm bd. ft. plywood.28/ 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service Study.3/ 4 - 1970 Directory Forest Products Industry, 51st ed. 5 - Oregon Covered Employment 1968

u. Economic Dependency of Eastern Oregon Mills on BLM Timber in the Burns District

(1) Dependency of Grant County Mills on BLM Timber

Total 1968 covered employment in Grant County was 1,982. Ratio of basic to service industries was 1 to 1.3. Employment in forest industries was 806 people, 40.7% of the available jobs. Table 38 shows there were two large mills and one small mill plus one veneer plant in the county. The Hines Mill at Bates bought no BLM stumpage. Another mill is at John Day, population 1,531 with a work force of 406.* BLM timber used was 2.3% of the total wood used, accounting for 20 jobs in wood products employment, about 5% of the employment in John Day. The BLM timber purchased by San Juan Lumber Company was only 10% of its annual use so was not a critical factor in the continued operation of the mill. San Juan Lumber Company is a large Class B mill. The small mills bought no BLM timber.

(2) Dependency of Harney County Mills on BLM Timber, Burns District, 1968

The 1968 covered employment in Harney County was 1,914 (see Table 37). Ratio of basic to service employment was 1 to 1.7. The only two towns in the county are Burns, population 3,206, and Hines, population 1,396. The two are only 2 miles apart and comprise one economic community of 4,602 people, having a work force of 1,221. Processing wood products provides 702 jobs. The BLM timber sold provided about 18 jobs, only 2.6% of the total. This indicates that BLM timber has little impact on the economy of either Harney County or the Burns-Hines community.

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*Based on the state average of one worker per 3.77 population.[30/]

Table 38

BLM Burns District Contribution to Sawmill & Plywood Employment in Eastern Oregon 1968

	Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment**	Employment Credit BLM
GRANT COUNTY	Hines Lbr. Co.	Bates	*	0	0	38,000	0	B	125	0
	San Juan Lbr.	John Day	1,531	3	3,867	38,880	10	B	202	20**
	Leland Howden	John Day	1,531	1	170	n.a.	n.a.	n.a.	n.a.	1**
	G.L. Pine, Inc.	John Day	1,531	0	0	4,376	0	Veneer	38	0
	G.L. Pine, Inc. Lbr.	John Day	1,531	0	0	12,007	0	n.a.	60	0
	Total John Day			4	4,037	93,263	9.3		300	21
	Hines Veneer	Mt. Vernon	440	0	0	21,394	0	Veneer	187	0
	Prairie City Tbr.	Prairie City	908	0	0	15,000	0	C	38	0
	Hines Lbr. Co.	Seneca	*	0	0	(40,000)	0	Planing Mill Only	36	0
	Total Grant County 8			4	4,037	129,657	3.1		710[5]	21
HARNEY COUNTY	Hines Lbr. Co. Hines Plywood 2	Hines Hines	1,396 1,396	2	3,015	96,000 36,160	2.3	A Ply	656	18**
	Total Harney County			2	3,015	132,160	2.3		656[5]	18
	Total Burns District			6	7,052	261,817	2.4		1,366	39

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr and 8.72 per 1 mm bd. ft. plywood.[28] 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, and Class A 120 plus mbf/day. 3 - Compiled from Forest Service study.[3] 4 - 1970 Directory Forest Products Industry, 51st ed. 5 - Oregon Covered Employment & Payrolls 1968, State of Oregon 1969.

v. Economic Dependency of Eastern Oregon Mills on BLM Timber in the Prineville District in 1968

(1) Dependency of Crook County Mills on BLM Timber

Total 1968 covered employment in Crook County was 2,746. Wood products employment was 1,506 or 54.8% of total. Ratio of basic to service industry was 1 to 0.8, reflecting the fact that the city of Bend in Deschutes County provides much of the service needs for Crook County residents. Prineville with a population of 4,217 is the only town of consequence in the county. There are four large Class A mills in Prineville and 12 logging firms. As shown in Table 39, BLM timber sold equalled 3% of the total consumed in the county. Three percent of the wood products employment equals 42 jobs creditable to BLM stumpage. Using the state average of one worker per 3.77 people [30/] gives a work force of 1,119 people in Prineville. Employment based on BLM timber is only 3.8% of this.

(2) Dependency of Deschutes County Mills on BLM Timber in 1968

Total 1968 covered employment in Crook County in 1968 was 7,458. Wood products employment was 1,846, 24.8% of total covered employment. Ratio of basic to service industry was 1 to 1.9. The relatively high incidence of service industry reflects the fact that Bend is a major trading center for central Oregon plus the fact that Bend is on U. S. Hwy. 97 and is a major tourist and recreation center. There are only three towns in the county. Table 39 shows that six of the wood processing plants are in Bend and two are in Redmond. Based on Bend's population of 13,235, it would have a work force of 3,511.* BLM timber used was 3.6% of the total, supporting 66 of the workers in the lumber industry. This is only 1.9% of the city's work force and is a relatively insignificant part of the local economy. However, the 3,506 M bd. ft. BLM timber bought by the two small Class D mills may have been critical to their continued operation.

(3) Dependency of Jefferson County Mills on BLM Timber in 1968

Total 1968 covered employment in Jefferson County was 1,703. Wood products employment was 341, 20% of the total. Ratio of basic to service industries was 1 to 2.8. Madras, population 1,699, is the major town in the county. Agriculture is the primary industry. The high proportion of service industry reflects the fact that there is very little basic industry employment in the county. The only wood processing plants are at Warm Springs on the Indian Reservation. BLM timber makes no contribution to the economy of Jefferson County.

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*State average equals one person under covered employment per 3.77 population.[30/]

(4) Dependency of Wasco County Mills on BLM Timber in 1968

Total 1968 covered employment in Wasco County was 4,499. Wood products employment was 383, 8.5% of total. Ratio of basic to service type industries was 1 to 2.8, reflecting the importance of The Dalles as a trading center for north central Oregon. There are two sawmills in the county, one at Maupin, population 410, and one at Tygh Valley, population under 500. Neither of these mills bought BLM timber in 1968. However 1.3% of the timber harvested in the county was BLM stumpage, providing employment for 5 people.

(5) Dependency of Wheeler County Mills on BLM Timber in 1968

Total 1968 covered employment in Wheeler County was 415. Wood products employment was 319, 77% of the total. Ratio of basic to service industry was 3 to 1, reflecting the undeveloped state of the county. The one mill in the county at Kinzua, population less than 500, bought no BLM timber in 1968. BLM timber from prior sales constituted 6.2% of total wood harvested in the county, providing 20 of the jobs. This was 4.8% of total employment in the county. Considering the limited amount of employment in the county, the 4.8% BLM contribution might be more important to the economy here than would be the case in other Oregon counties.

(6) Summary - Contribution of Prineville District Timber to the Economy, 1968

Only 2½% of the wood industry employment in the Prineville District is creditable to BLM timber. It is less than 1% of total covered employment so has little effect on the economy of the area.

Table 38

BLM Prineville District Contribution to Sawmill & Plywood Employment in Eastern Oregon 1968

	Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment**	Employment Credit BLM
CROOK COUNTY	Consolidated Pine	Prineville	4,217	0	0	30,625	0	A	150	0
	Hudspeth Pine	Prineville	4,217	0	0	33,263	0	A	166	0
	Ochoco Lbr. Co.	Prineville	4,217	0	0	30,700	0	A	170	0
	Central Ore. Log.	Prineville	4,217	1	3,825	n.a.	n.a.	n.a.	n.a.	n.a.
	Pine Products Corp.	Prineville	4,217	0	0	35,000	0	A	147	0
	Total Crook County			1	3,825	129,588	3.0		1,506	42[5]
DESCHUTES COUNTY	Ralph Bailey Lbr.	Bend	13,235	0	0	n.a.	-	n.a.	n.a.	0
	Brooks-Scanlon	Bend	13,235	1	377	100,000	0.4	A	561	3
	Brooks-Willamette	Bend	13,235	0	0	n.a.	-	Pulpwood	n.a.	0
	Wm. Fox Lbr.	Bend	13,235	0	0	n.a.		n.a.	n.a.	0
	Renco Corp.	Bend	13,235	1	1,634	n.a.	-	n.a.	n.a.	9
	Katter Lbr. Co.	Bend	13,235	1	1,872	n.a.	n.a.	n.a.	n.a.	10
	Total Bend			3	3,883	100,000	3.0			22
	Brooks-Willamette	Redmond	3,623	0	0	24,800	0	B	129	0
	Whittier Moulding	Redmond	3,623	0	0	n.a.	0	n.a.	n.a.	0
	Marion Bandsten	Prineville	4,217	1	126	n.a.	-	n.a.	n.a.	1
	Total Deschutes County			4	4,009	124,800	3.1		1,846	66[5]
JEFFERSON COUNTY	Brooks-Willamette	Redmond	3,623	1	68	See Deschutes County Data -----------------				0
	Warm Springs For. Prod.	Warm Springs	*	0	0	70,000	0	B	310	0
WASCO COUNTY	Mt. Fir Lbr. Co.	Maupin	410	0	0	48,587	0	B	95	0
	Central Ore. Log.	Prineville	4,217	1	3,825	See Crook County Data ---------------------				5[1]
	Tygh Valley Tbr.	Tygh Valley	*	0	0	24,800	0	B	129**	0
	Total Wasco County			1	3,825	73,387	4.8		383	5
WHEELER COUNTY	Kinzua Corp.	Kinzua	*	0	0	35,000	0	A	319	0
	Total Prineville District			8	11,727	432,775	2.7		4364	118

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr and 8.72 per 1 mm bd. ft. plywood.28/ 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service Study.3/ 4 - 1970 Directory Forest Products Industry. 5 - Oregon Covered Employment 1968.

w. Economic Dependency of Lake County Mills on BLM Stumpage, Lakeview District

Total 1968 covered employment in Lake County was 1,686. Wood products employment was 515, 30.5% of the total. Ratio of basic to service industry employment was 1 to 2. There are only four towns in the county; Lakeview with population of 2,675, Paisley, population 240, Summer Lake and Silver Lake both with populations under 500.

Table 40 shows there are three sawmills in Lakeview, none of which bought BLM timber in 1968. The two BLM timber sales made were purchased by a mill at Alturas, California. BLM timber had no impact on Lake County's economy in 1968.

4. Summary

Tables 21 to 40 show that it is mostly the big Class A and B sawmills and plywood mills that are buying BLM stumpage. Apparently the smaller, less efficient mills are unable to compete with the big mills in bidding for timber sales. From an economic standpoint this is good because the big mills are able to make more complete utilization of the wood fiber whereas some of the smaller mills are still burning their slabs, sawdust, and bark. They are not only wasting the resource but are degrading the environment with their wigwam burners.

On a geographical basis, BLM timber is of little importance to any county in eastern Oregon. No mill or community is found to be significantly dependent on BLM timber. Indications are that BLM timber in eastern Oregon is more valuable for its recreation and scenic aspects than from its use as wood fiber.

Table 40

BLM Lakeview District Contribution to Sawmill & Plywood Employment in Eastern Oregon 1968

	Mill or Purchaser	Location	Population	No. BLM Sales	BLM Tbr. Bought mbf	Annual[4] Wood Consumption mbf	% BLM Timber	Size Class Mill[2]	Employment**	Employment Credit BLM
LAKE COUNTY	Eastern Org. Pine	Lakeview	2,675	0	0	15,600	0	C	81	0
	Fremond Sawmill	Lakeview	2,675	0	0	19,840	0	B	103	0
	Lakeview Lbr.	Lakeview	2,675	0	0	25,520	0	B	150	0
	Goose Lake Tbr.	Alturas, Calif.		2	2,196	n.a.	n.a.	n.a.	n.a.	3[1]
	Misc. Sales									
	Total Lakeview District			2	2,196	60,960[3]	3.6		437[5]	3

*Less than 500 population. **Based on 5 employees per 1 mm bd. ft. lbr. and 8.72 per 1 mm bd. ft. plywood.28/ 1 - Logging employment only. 2 - Class D daily capacity up to 40 mbf/day, Class C 40-79 mbf/day, Class B 80-119 mbf/day, Class A 120 plus mbf/day. 3 - Compiled from Forest Service study.3/ 4 - 1970 Directory Forest Products Industry, 51st ed. 5 - Oregon Covered Employment & Payrolls 1968, State of Oregon 1969.

5. Impact on Local Economies From BLM Timber Sales

a. Impact of BLM 1970 Timber Sale Program

Table 41 shows the direct economic impact of BLM timber sales, giving the amount of employment and the income resulting from processing BLM timber. In addition to this there is the induced economic activity and interactions resulting from the payroll and business expenditures of the wood products industry. Economic multipliers have been developed which measure the economic benefits of the original dollar expenditure as it is respent in the area to purchase other goods and services. The ratio of original dollar expenditure to impact on the economy is called a multiplier because it is an increase over the original dollar. Thus any increase in wood products production has an accelerating effect on the economy while a decrease causes deceleration which multiplies itself in proportion to the number of dollars lost to the economy. It is important to realize that a reduction or an increase in timber stumpage does not have a 1 to 1 impact on the economy but is multiplied several times.

Studies at Oregon State University indicate there is a close correlation in the amounts and kinds of wood products industry purchases through Oregon. They found that the multiplier effect on the economy in eastern Oregon is very close to that of mills in western Oregon. Table 42 shows the results of several pertinent input-output studies.

The input-output study for the State of Oregon was never intended to be a realistic statement of the structure of the Oregon economy. On the other hand it is the only study for the entire state and it serves to show that there is a greater amount of inter-related economic activity on a state basis than at the county level. Sawmill operations in Washington State are very similar to those in Oregon. Therefore the data from the State of Washington input/output study is deemed applicable to Oregon's wood products industry. The Washington study is based on much more solid data than the Oregon study and is used in this report in preference to the Oregon work.

There is some disparity in the multipliers for Clatsop and Lincoln Counties in western Oregon. This difference is hard to explain since their wood product based economies are very similar. There is a large pulp mill in each county. The major difference is the large log export business at Astoria whereas Lincoln County has no ocean ports for overseas trade. In this study the average of the multipliers from the two counties is used for western Oregon to even out possible disparities in the basic data used in computing the multipliers.

Table 41

Local Economic Benefits From BLM Timber Sales in 1970

District and County	BLM Timber Sold Mbf	% Total Used	Selling Price per Mbf	Value BLM Stumpage	Wood[1] Products Jobs Provided by BLM Timber	Total County Employ.	% Jobs from BLM Timber	Wages[2] Provided	Community[3] Income Benefit	Total Personal[4] Income in County	% Income from BLM Timber direct wages only
SALEM DISTRICT											
Coast Resource Area											
Benton	36,985.1	26.6	55.66	$2,058,494	392	22,480	1.7	$3,448,030	$4,875,170	$197,361,600	2.5
Clatsop	0	0	0	0	0	---	0	0	0	---	0
Columbia	785.0	0.8	22.86	17,947	9	8,190	0.1	79,140	111,896	105,585,100	0.1
Lincoln	26,407.0	11.7	40.62	1,072,636	108	8,660	1.2	914,540	1,293,068	92,358,100	1.4
Polk	14,527.0	16.5	50.08	727,570	248	13,465	1.8	2,117,170	2,993,467	129,552,700	2.3
Tillamook	45,137.0	21.2	34.80	1,570,927	269	5,790	4.6	2,211,980	3,127,519	63,466,700	4.9
Washington	1,899.8	9.3	22.71	43,160	69	32,283	0	527,780	746,228	570,336,600	0.1
Yamhill	62,448.5	100	33.48	2,091,094	725	13,450	5.4	5,966,020	8,435,357	146,710,600	5.7
Subtotal	188,189.4		40.29	7,581,828	1,820	104,318	1.7	15,264,660	21,582,705	1,305,371,500	
Cascade Resource Area											
Clackamas	54,652.5	16.6	35.39	1,934,339	335	76,847	0.4	2,767,430	3,912,869	608,672,200	0.6
Linn	89,016.0	14.9	49.08	4,368,982	702	27,340	2.6	6,174,790	8,730,536	257,286,300	3.4
Marion	11,682.0	9.9	45.52	531,784	88	57,435	0.2	695,460	983,310	546,865,400	0.2
Multnomah	56.0	1.7	16.30	913	0	229,163	0	0	0	2,029,839,800	0
Subtotal	155,406.5		43.99	6,836,018	1,125	390,785	0.3	9,637,680	13,626,715	3,442,663,700	
Dist. Total	343,595.9		41.96	14,417,846	2,945	495,103	0.6	24,902,340	35,209,420	4,748,035,200	
EUGENE DISTRICT											
Lane	173,907.4	13.5	51.53	8,960,590	1,833	84,400	2.2	15,345,870	21,697,526	787,846,000	2.8
ROSEBURG DISTRICT											
Douglas	479,375.8	34.5	44.81	21,479,283	2,586	26,570	9.7	22,557,670	31,894,290	262,358,500	12.2
COOS BAY DISTRICT											
Coos	179,769.3	32.7	45.89	8,250,141	1,780	21,000	8.5	16,101,880	22,766,448	205,242,200	11.1
Curry	38,402.0	13.8	30.32	1,164,224	180	4,410	4.1	1,570,140	2,220,021	47,183,200	4.7
Subtotal	218,171.3		43.15	9,414,365	1,960	25,410	7.7	17,672,020	24,986,469	252,425,400	
MEDFORD DISTRICT											
Jackson	138,816.9	44.1	28.93	4,015,718	2,010	37,060	5.4	17,243,790	24,380,995	344,527,900	7.1
Josephine	76,678.6	63.3	33.13	2,540,188	1,165	13,130	8.9	9,406,210	13,299,440	132,187,000	10.1
Klamath	30,522.5	7.1	34.20	1,043,870	244	19,160	1.3	2,099,860	2,968,992	179,559,100	1.7
Subtotal	246,018.0		30.89	7,599,776	3,419	69,350	4.9	28,749,860	40,649,427	656,274,000	6.2
West. Ore. Total	1,461,068.4		42.35	61,871,860	12,733	700,833	1.8	109,227,760	154,437,132	6,706,939,100	2.3

Table 41 (Cont.)

Local Economic Benefits From BLM Timber Sales in 1970

District and County	BLM Timber Sold Mbf	% Total Used	Selling Price Per Mbf	Value BLM Stumpage	Wood Products Jobs Provided[1]	Total County Employ.	% Jobs from BLM Timber	Wages Provided[2]	Community Income Benefit[3]	Total Personal Income in County[4]	% Income from BLM Timber
BAKER DISTRICT											
Baker	59*	0.1	25.19	1,486	0	5,450	0	$ 0	$ 0	$54,504,300	
Morrow	79	0.3	39.04	3,084	0	1,650	0	0	0	15,775,900	
Umatilla	0	0	0	0	0	17,480	0	0	0	163,205,300	
Union	2,411	1.9	11.31	27,257	22	7,790	0.3	190,690	287,942	71,669,500	0.4
Wallowa	86	0.1	5.0	430	0	2,240	0	0	0	22,359,700	0
Subtotal	2,635		12.24	32,257	22	34,610	0	190,690	287,942	327,514,700	0.2
PRINEVILLE DISTRICT											
Crook	12,131.3	11.9	21.19	257,041	163	4,020	4.1	1,258,190	1,899,867	36,464,600	5.2
Deschutes	134.6	0.1	3.93	530	2	12,090	0	16,142	24,374	109,575,400	0
Gilliam	0	0	0	0	0	891	0	0	0	8,184,300	0
Jefferson	0	0	0	0	0	3,650	0	0	0	31,903,800	0
Sherman	0	0	0	0	0	2,860	0	0	0	7,602,700	0
Wasco	1,017.3	1.0	24.12	24,526	3	8,009	0	25,356	38,288	71,939,900	0
Wheeler	104.0	0.3	14.19	1,476	1	740	0	8,816	13,312	6,528,200	0.2
Subtotal	13,387.2		21.18	283,573	169	32,260	0.5	1,308,504	1,975,841	272,198,900	
VALE DISTRICT											
Malheur	0	0	0	0	0	7,211	0	0	0	85,259,500	0
BURNS DISTRICT											
Grant	6,178.5	2.6	19.82	122,491	16	2,840	0.6	127,950	193,205	25,608,900	0.7
Harney	865.2	1.4	18.06	15,623	10	3,080	0.3	85,890	129,694	26,146,200	0.5
Subtotal	7,043.7		19.61	138,114	26	5,920	0.4	213,840	322,899	51,755,100	0.6
LAKEVIEW DISTRICT											
Lake	3.5	0	8.57	30	0	2,760	0	0	0	23,145,100	0
East Ore. Tot.	23,069.4		19.68	453,974	217	82,761	0.3	1,713,034	2,586,682	759,873,300	
Oregon TOTAL	1,484,137.8		41.99	62,325,834	12,950	783,594	1.7	110,940,794	157,023,814	7,466,812,400	2.1

*Sold in FY 1970. 1 - Based on percentage of BLM timber to total timber harvest. 2 - Based on average wood product employment salary by county.
3 - Based on income multiplier of 1.51 for lumber and wood products, 1.26 for plywood, 1.33 for pulp and paper (averages 1.4139 for western Oregon)48/
4 - Based on data from "Survey of Current Business", August 1971.

Table 42

Economic Multipliers For Measuring Economic Impact of Sawmill Industry

County	Household Income Multiplier	Income/Output Multiplier
Grant[42]	1.173	1.63
Klamath[43]	1.43	1.84
Lincoln[44]	1.27	1.56
Clatsop[45]	1.47	1.41
Average of Clatsop/Lincoln	1.37	1.49
State of Oregon[46]	3.1372	2.0477
State of Wash. 1967[47]	3.32	1.48
State of Wash. 1963[48]	3.43	1.51

Grant County sawmilling operations are believed more typical of eastern Oregon operations than the mills in Klamath County. Multipliers from the Grant County study are used herein for measuring economic impact of BLM timber sales in eastern Oregon except for Klamath County. Economic benefits from BLM timber sales in eastern Oregon are shown to be insignificant. Based on percentage of total personal income in Western Oregon counties, Table 41 shows that BLM timber makes an important contribution in only the Roseburg and Coos Bay Districts. (over 5% of personal income)

b. Impact of a Change in Amount of Timber Sold

A recent reinventory of BLM timber necessitated a reduction of about 150 million board feet in the previous annual allowable cut in western Oregon. Table 43 shows the impact on wages. Table 44 portrays impact on personal incomes. State employment data shows an employment dependency ratio of one worker in basic industry to 2.223 in service industries. This is the basis for the resource evaluation in Table 43.

Income and input-output multipliers provide another measure of impact of change in resource evaluation. This method is used as another approach in evaluating impact of a reduction of 150 million board feet timber harvest.

Both analyses show that impact on Oregon's economy from reduction in annual harvest of 150 mm bd. ft. timber will have no more than 0.4% impact on the economy of the State.

Some areas of Oregon are more dependent on BLM stumpage than are others. Tables 45 to 54 show the impact on local communities from a reduction in BLM timber sales. The indicated reduction in BLM sales in Douglas County will result in loss of 764 jobs and nearly $3 million in personal income on the assumption that substitute supplies of timber are not available.

A 36 mm bd. ft. reduction in availability of BLM stumpage would reduce employment in wood products industries by 226 jobs plus 503 jobs in dependent service industries in Coos and Curry Counties. It would reduce total personal income by over $2,600,000. This is on the assumption that substitute supplies of timber are not available.

A 22 mm bd. ft. increase in stumpage availability in Lane County would make possible 444 additional jobs and increase personal income by over $1,600,000.

A reduction of 18 mm bd. ft. stumpage in the Medford District would affect the economies of Jackson, Josephine, and Klamath Counties as shown in Table 48. About 252 jobs will be lost by the reduction of available timber in the Medford district, resulting in a loss of $1,196,166 in personal income.

Table 43

Impact on Oregon's Economy From Reduction of 150 MM bd. ft. Allowable Cut BLM Stumpage

Timber Harvest Level	Timber[4] Harvest mbf	Industry* Jobs Provided	Industry** Wages Provided	Service Industry Jobs Supported[1]	Service[2] Wages Provided	Total Jobs Provided	Total Wages Provided	Total[48] Personal Income in State	% Income From BLM Timber
1970 level	1,150,900	7,437	$63,735,090	16,532	$109,476,640	23,969	$173,211,730	$7,777,000,000	2.2
Reduced level	1,000,900	6,381	54,685,170	14,185	94,968,575	20,566	149,653,745		1.9
Economic Loss	150,000	1,056	9,049,920	2,347	15,713,165	3,403	24,763,085		0.3

Table 44

Impact on Oregon's Economy From Reduction of 150 MM bd. ft. Allowable Cut BLM Stumpage

Timber Harvest Level	Timber[4] Harvest mbf	Industry* Jobs Provided	Total[32] Employment 1970	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit[3]	Total Personal Income-Oregon	% Income From BLM Timber
1970 level	1,150,900	7,437	567,707	1.3	$63,735,090	$211,600,499	$7,777,000,000	2.7
Reduced level	1,000,900	6,381		1.1	54,685,170	181,554,764		2.3
Economic loss	150,000	1,056		0.2	9,049,920	30,045,735		0.4

Table 45

Impact on Economy of Douglas County By a 37.9 MM bd. ft. Reduction in Available Stumpage

Timber Harvest Level	Timber[4] Harvest mbf	Industry Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal[5] Income Benefit	Total Personal Income-County $1,000	% Income From BLM Timber	Service Industry Jobs Supported
1970 level	238,000	1,494	26,570	5.6	$12,803,580	$17,540,905	262,358.5	6.7	3,321
Reduced level	200,100	1,257		4.7	10,772,490	14,758,311		5.6	2,794
Economic loss	37,900	237		0.9	2,031,090	2,782,594		1.1	527

*Based on breakdown by industry: 62% sawmills & shingles x 5 man years per 1 mm bd. ft. plus 37% x 8.72 plywood employment, and 4.89 pulp and paper employment x 1% = av. employment of 6.2753 per 1 mm bd. ft. timber used.[28] **Based on average wage of $8,570 in wood products industry.[32] 1 - Based on state average of 2.223 service industry employment to one worker in basic industry.[32] 2 - Based on state average wage per worker in service industry of $6,695.[32] 3 - Based on household income multiplier of 3.32.[47] 4 - Allowable cut. 5 - Based on a local household multiplier of 1.37.[44]

Table 46

Impact on Economy of Coos and Curry Counties By a 36 MM bd. ft. Reduction in Available Stumpage

Timber Harvest Level	Timber Harvest mbf [4]	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit [1]	Total County Personal Income 49/ $1,000	% Income From BLM Timber	Service Industry Jobs Supported
1970 level	270,000	1,694	25,410	6.7	$14,517,580	$19,889,085	$252,425.4	7.9	3,766
Reduced level	234,000	1,468		5.8	12,580,760	17,235,641		6.8	3,263
Economic loss	36,000	226		0.9	1,936,820	2,653,444		1.1	503

Table 47

Impact on Economy of Lane County By a 22 MM bd. ft. Increase in Available Timber Supplies

Timber Harvest Level	Timber Harvest mbf [4]	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit [1]	Total County Personal Income 49/ $1,000	% Income From BLM Timber	Service Industry Jobs Supported
1970 level	197,000	1,236	84,400	1.5	$10,592,520	$14,511,752	$787,846.0	1.8	2,748
Increased level	219,000	1,374		1.6	11,775,180	16,131,997		2.0	3,054
Economic gain	22,000	138		0.1	1,182,660	1,620,245		0.2	306

*Average man years per 1 mm bd. ft. timber processed all industries = 6.2753. 28/ **Based on average wage in wood products industry. 32/

1 - Based on a household income multiplier of 1.37. 44/ 45/ 2 - Data from Survey Current Business. 49/ 4 - Allowable Cut

Table 48

Impact on Economy of Counties in Medford District by a 18 MM bd. ft. Reduction Available Stumpage

Timber Harvest Level	Timber[4] Harvest mbf	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal[1] Income Benefit	Total County Personal Income[2]	% Income From BLM Timber	Service Industry Jobs Provided
					Josephine County				
							$1,000		
1970 level	157,000	985	13,130	7.5	7,952,890	10,895,459	132,187.0	8.2	2,190
Decreased level	146,000	916		7.0	7,395,784	10,132,224		7.7	2,036
Economic loss	11	69		0.5	557,106	763,235		0.5	154
					Jackson County				
1970 level	102,000	640	37,060	1.7	5,490,560**	7,522,067	344,527.9	2.2	1,423
Increased level	103,000	646		1.7	5,542,034	7,592,587		2.2	1,436
Economic gain	1,000	6			51,474	70,520			13
					Klamath County				
1970 level	33,000	207	19,160	1.1	1,781,442	2,084,287	179,559.1	1.2	460
Reduced level	25,000	157	19,160	0.8	1,351,142	1,580,836		0.9	349
Economic loss	8,000	50		0.3	430,300	503,451		0.3	111

*Average man years per 1 MM bd. ft. timber processed all industries = 6.2753.[28/] **Based on average wage in wood products industry.[32/]
1 - Based on a household income multiplier of 1.37.[44/45/] 2 - Data from Survey Current Business.[49/] 4 - Allowable Cut.

Table 49 shows the impact on the economy of counties in BLM Salem District, Columbia Master Unit. Impact on the economy of Clatsop County was found to be insignificant on the basis of the small acreage of BLM forest lands in the county. This shows that a reduction of 15 million bd. ft. stumpage in the Columbia Master Unit will result in the loss of about 300 jobs in basic and dependent service industries. Impact on total personal income is insignificant.

Table 50 shows that a reduction of 35 million bd. ft. stumpage to local mills in the Alsea-Rickreall Master Unit will result in a loss of 220 jobs in the wood products industry plus 489 jobs in dependent and service type employment. It shows only minor impact on the personal income on a county or master unit basis.

Table 51 shows the impact of 9 mm bd. ft. stumpage reduction in the Clackamas-Molalla Unit. A 9 mm bd. ft. reduction in availability of BLM stumpage will have virtually no impact on the economy of either Clackamas or Multnomah County.

A 23 million bd. ft. reduction in available stumpage will have very little impact on the economies of Marion or Linn Counties. (see Table 52)

Table 49

Impact on Local Economies In Salem BLM District By a 82 MM bd. ft. Reduction Available Stumpage

Timber Harvest Level	Timber Harvest mbf[3]	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal[1] Income Benefit	Total County Personal Income[2]	% Income From BLM Timber	Service Industry Jobs Provided
Impact of Reduction of 1.4 MM bd. ft. in Columbia County, Coast Resource Area									
							$1,000		
1970 level	8,600	54	8,190	0.8	$474,876	$650,580	$105,585.1	0.6	120
Reduced level	7,200	45		0.8	395,730	542,150		0.5	100
Economic loss	1,400	9			79,146	108,430		0.1	20
Impact of Reduction 6.4 MM bd. ft. Stumpage in Tillamook County, Coast Resource Area									
1970 level	39,400	247	5,790	4.3	2,031,081	2,782,581	63,466.7	4.4	549
Reduced level	33,000	207		3.6	1,702,161	2,331,961		3.7	460
Economic loss	6,400	40		0.7	328,920	450,620		0.7	89
Impact of Reduction 1.5 MM bd. ft. Stumpage in Washington County, Coast Resource Area									
1970 level	9,400	59	32,283	0.2	451,291	618,269	570,336.6	0.1	131
Reduced level	7,900	50		0.2	382,450	523,957		0.1	111
Economic loss	1,500	9			68,841	94,312			20
Impact of Reduction 5.5 MM bd. ft. Stumpage in Yamhill County, Coast Resource Area									
1970 level	33,700	211	13,450	1.6	1,736,319	2,378,757	146,710.6	1.6	469
Reduced level	28,200	177		1.3	1,456,533	1,995,450		1.4	393
Economic loss	5,500	34		0.3	279,786	383,307		0.2	76
Total Impact Summary Columbia Master Unit, Coast Resource Area, Salem District									
1970 level	92,000	577	71,293	0.8	4,944,890	6,774,499	989,329.9	0.7	1,283
Reduced level	77,000	483		0.7	4,139,310	5,670,855		0.6	1,074
Economic loss	15,000	94		0.1	805,580	1,103,644		0.1	209

*Average man years per 1 MM bd. ft. Sawmills, plywood & pulp = 6.2753.[28] **Based on average wage of $8,570 wood products industry.
1 - Based on a household income multiplier of 1.37.[44][45] 2 - Data from Survey Current Business.[49] 3 - Based on household income multiplier of 3.32.[47] 4 - Allowable cut.

Table 50

<table>
<tr><td colspan="10">Impact of Reduction 16.1 MM bd. ft. Stumpage in Benton County, Alsea-Rickreall Master Unit, Salem District</td></tr>
<tr><th>Timber Harvest Level</th><th>Timber[4] Harvest mbf</th><th>Industry* Jobs Provided</th><th>Total 1970 County Employment</th><th>% Jobs From BLM Timber</th><th>Wages** Provided</th><th>Total Personal[1] Income Benefit</th><th>Total County Personal Income[2] $1000</th><th>% Income From BLM Timber</th><th>Service Industry Jobs Provided</th></tr>
<tr><td>1970 level</td><td>53,400</td><td>335</td><td>22,480</td><td>1.5</td><td>$2,946,660</td><td>$4,036,924</td><td>$197,361.6</td><td>2.0</td><td>745</td></tr>
<tr><td>Reduced level</td><td>37,300</td><td>234</td><td></td><td>1.0</td><td>2,058,264</td><td>2,819,822</td><td></td><td>1.4</td><td>520</td></tr>
<tr><td>Economic loss</td><td>16,100</td><td>101</td><td></td><td>0.5</td><td>888,396</td><td>1,217,102</td><td></td><td>0.6</td><td>225</td></tr>
<tr><td colspan="10">Impact of Reduction 7 MM bd. ft. Stumpage in Lincoln County, Alsea-Rickreall Master Unit, Salem District</td></tr>
<tr><td>1970 level</td><td>23,300</td><td>146</td><td>8,660</td><td>1.7</td><td>1,236,328</td><td>1,693,769</td><td>92,358.2</td><td>1.8</td><td>325</td></tr>
<tr><td>Reduced level</td><td>16,300</td><td>102</td><td></td><td>1.2</td><td>863,736</td><td>1,183,318</td><td></td><td>1.3</td><td>227</td></tr>
<tr><td>Economic loss</td><td>7,000</td><td>44</td><td></td><td>0.5</td><td>372,592</td><td></td><td></td><td>0.5</td><td>98</td></tr>
<tr><td colspan="10">Impact of Reduction of 11.9 MM bd. ft. Stumpage in Polk County, Alsea-Rickreall Master Unit, Salem</td></tr>
<tr><td>1970</td><td>39,300</td><td>247</td><td>13,465</td><td>1.8</td><td>2,108,639</td><td>2,888,835</td><td>129,552.7</td><td>2.2</td><td>549</td></tr>
<tr><td>Reduced level</td><td>27,400</td><td>172</td><td></td><td>1.3</td><td>1,468,364</td><td>2,011,659</td><td>129,552.7</td><td>1.6</td><td>382</td></tr>
<tr><td>Economic loss</td><td>11,900</td><td>75</td><td></td><td>0.5</td><td>640,275</td><td>877,176</td><td></td><td>0.6</td><td>167</td></tr>
<tr><td colspan="10">Total Impact Alsea-Rickreall Master Unit, Salem District</td></tr>
<tr><td>1970 level</td><td>116,000</td><td>728</td><td>44,605</td><td>1.6</td><td>6,291,627</td><td>8,619,529</td><td>419,272.5</td><td>2.1</td><td>1,618</td></tr>
<tr><td>Reduced level</td><td>81,000</td><td>508</td><td></td><td>1.1</td><td>4,390,364</td><td>6,014,799</td><td></td><td>1.4</td><td>1,129</td></tr>
<tr><td>Economic loss</td><td>35,000</td><td>220</td><td></td><td>0.5</td><td>1,901,263</td><td>2,604,730</td><td></td><td>0.7</td><td>489</td></tr>
</table>

*Average man years per 1 MM bd. ft. sawmills, plywood & pulp = 6.2753.[28] ** Based on average wage of $8,570 wood products industry.

1 - Based on a household income multiplier of 1.37.[44/45] 2 - Data from Survey Current Business.[49] 4 - Allowable Cut.

Table 51

Impact of 8.3 MM bd. ft. Stumpage Reduction in Clackamas County, Clackamas-Molalla Master Unit, Salem District

Timber Harvest Level	Timber Harvest[4] mbf	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit[1]	Total County Personal Income[2] $1,000	% Income From BLM Timber	Service Industry Jobs Provided
1970 level	37,800	237	76,847	0.3	$1,957,857	2,682,264	608,672.2	0.4	527
Reduced level	29,500	185		0.2	1,528,285	2,093,750		0.3	411
Economic loss	8,300	52		0.1	429,572	588,514		0.1	116

Impact of 700 MM bd. ft. Stumpage Reduction in Multnomah County, Clackamas-Molalla Master Unit, Salem District

Timber Harvest Level	Timber Harvest[4] mbf	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit[1]	Total County Personal Income[2] $1,000	% Income From BLM Timber	Service Industry Jobs Provided
1970 level	3,200	20	229,163	0	171,400	234,818	2,029,839.8	0.01	44
Reduced level	2,500	16		0	137,120	187,854			36
Economic loss	700	4		0	34,280	46,964			8

Total Impact Clackamas-Molalla Master Unit, Salem District

Timber Harvest Level	Timber Harvest[4] mbf	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal Income Benefit[1]	Total County Personal Income[2] $1,000	% Income From BLM Timber	Service Industry Jobs Provided
1970 level	41,000	257	306,010	0.08	2,129,257	2,917,082	2,638,512.0	0.1	574
Reduced level	32,000	201		0.06	1,665,405	2,281,605		0.08	447
Economic loss	9,000	56			463,852	635,477		0.02	124

*Average man years per 1 MM bd. ft. sawmills, plywood, pulp = 6.2753.[28] **Based on average wage of $8,570 wood products industries 1970.[32]

1 - Based on a household income multiplier of 1.37.[44]/[45] 2 - Data from Survey Current Business.[49] 4 - Allowable Cut.

Table 52

Timber Harvest Level	Timber[4] Harvest mbf	Industry* Jobs Provided	Total 1970 County Employment	% Jobs From BLM Timber	Wages** Provided	Total Personal[1] Income Benefit	Total County Personal Income[2] $1,000	% Income From BLM Timber	Service Industry Jobs Provided
Impact on Marion County of a 4.3 MM bd. ft. Reduction Available Stumpage, Salem District, Santiam Unit									
1970 level	14,600	91	57,435	0.15	719,173	985,267	$546,865.4	0.2	202
Reduced level	10,300	65		0.11	513,695	703,762		1.2	144
Economic loss	4,300	26		0.04	205,478	281,505		0.8	58
Impact on Linn County of a 18.7 MM bd. ft. Reduction Available Stumpage, Salem District, Santiam Unit									
1970 level	62,400	392	27,340	1.4	3,448,032	4,723,804	608,672.2	0.8	871
Reduced level	43,700	274		1.0	2,410,104	3,301,842		0.5	609
Economic loss	18,700	118		0.4	1,037,928	1,421,962		0.3	262
Impact on Economy of a 23 MM bd.ft. Reduction Available Stumpage in Santiam Unit, Salem District									
1970 level	77,000	483	84,775	0.6	4,167,205	5,709,071	1,155,537.6	0.5	1,073
Reduced lever	54,000	339		0.4	2,923,799	4,005,605		0.3	753
Economic loss	23,000	144		0.2	1,243,406	1,703,466		0.2	320

*Average man years per 1 MM bd. ft. sawmills, plywood, pulp = 6.2753.[28] **Based on average wage wood products industry.[32]

1 - Based on a household income multiplier of 1.37.[44][45] 2 - Data from Survey Current Business, Aug. 1971. 4 - Allowable Cut.

c. Economic Impact of Intensified Forest Management Practices

There is opportunity to put more men to work and increase local payrolls through an intensified forest management program. Some of these practices, such as commercial thinning, provide their economic benefits through increased timber harvest. Some are non labor intensive, such as forest fertilization. Forest management practices which require labor input include precommercial thinning, brush and hardwood control, and tree planting, Current tree planting programs are found to meet existing needs and do not need to be intensified. Table 53 shows economic benefits on a district basis from an intensive program of precommercial thinning and brush and hardwood control. There is no known need for this type of work in the Medford district. Table 53 indicates an intensified forest management program on BLM forest lands will have a relatively small immediate economic impact on a district wide basis. However, it could have major impact on the economies of local communities where the work is undertaken. This is not to say that there is not opportunity to put large numbers of men to work in jobs such as tree pruning, stream cleanup, debris removal, trail construction, and many other forest improvement projects should funds become available.

The major economic benefit from intensified forest management is the opportunity to harvest an increased amount of timber immediately based on the accelerated growth of the timber under intensive management. This is a separate study from the scope of this report.

The major economic benefit from intensified forest mana

Table 53

Potential Economic Benefits from Intensified Timber Management Opportunities

	Annual Precommercial Thinning				Annual Brush and Hardwood Control				
District	Treatment Acres	Man[1] Days Required	Wages* Earned	Economic Benefit To** Community	Treatment Acres	Man[2] Days Required	Wages* Earned	Economic Benefit To** Community	Total Economic Benefit
Salem	2,000	2,000	$79,340	$108,696	1,500	15	$595	$815	$109,511
Eugene	4,000	4,000	158,680	217,392	--	--	--	--	217,392
Roseburg	1,500	1,500	59,500	81,515	--	--	--	--	81,515
Coos Bay	1,500	1,500	59,500	81,515	800	8	317	434	81,949
Medford	--	--	--	--	--	--	--	--	--
TOTAL	9,000	9,000	357,020	489,118	2,300	23	912	1,249	490,367

[1] - At one acre per day per man.

[2] - At 100 acres per day per man.

*Based on average salary for wood prod. industry West. Oregon of $7,934 and 200 working days per year.

**Based on a household income multiplier of 1.37.44/45/

6. Future Forest Economy

National demand for veneer and plywood is expected to double by 1985. Lumber demand is projected to increase by 22% over 1962.[19/] Consumption of paper and board is expected to more than double between 1970 and 2000.[20/] On a National scale stumpage demands are expected to increase 12.7% between 1970 and 1980 and increase by 51.1% by year 2000.[20/] Location of new integrated wood processing plants is trending towards larger central city areas to be near supporting industries and labor supply. The service industries, too, are leaving the smaller towns to find wider markets in the central cities. Thus it may require more than additional stumpage to sustain the economy of the smaller mill towns in Oregon.

The demand for logs for export continually increases. High prices paid for export timber is more than many of our smaller, non-integrated mills can afford to pay for stumpage.

Japanese forecasts show that country will need to double its timber imports by 1995 over 1964 imports. Japan will need nearly 51 billion board feet of timber by 1985.[26/] The export market will be in competition for Oregon logs and wood waste for at least the next 25 years. The recent devaluation of the dollar will greatly increase Japan's competitive position in buying logs and lumber in the Northwest.

Northern California mills are also expected to be increasingly competitive for timber sales in southwest Oregon.

It is expected that southern plywood and lumber mills located in the southern states will continue to capture more of the nation's markets because of a cheap labor supply, proximity to major markets, and cheaper road construction due to less rugged topography.

Range Forage

BLM Library
Denver Federal Center
Bldg. 85, OC-521
P.O. Box 25047
Denver, CO 80225

C. Use of Forage Resources on Public Lands

1. General

For the past 100 years there has been intensive grazing use of the public lands in Oregon. Excessive livestock use continued to deplete these lands until passage of the Taylor Grazing Act of 1934. Under this Act only a portion of the ranchers in the area were able to show grazing use dependency during the base period set by law. For this reason many more ranchers desire the use of the public lands than are qualified. Accordingly, sales of grazing privileges on public lands command a high premium and are much in demand. One reason for this has been the traditionally low grazing fee charged for use of the public lands at only a fraction of the cost of using comparable private lands. As long as this situation prevails, demand for use of the public lands will far exceed the supply.

Beef prices remained relatively stable from 1960 to 1970 in comparison to inflationary price trends for other commodities. This has forced the small, less efficient rancher out of business and led to consolidation into larger ranch ownerships. As shown in Table 54 there was a 36.1% decrease in the number of cattle ranchers in Oregon from 1964 to 1969. In working up this data there was found a sharp drop also in the number of dairy farmers in eastern Oregon, particularly in the Baker district. There was also a sharp drop in the number of farms running sheep. Even yet, there is a large number of farms with sheep in comparison to numbers of sheep, indicating that most are being run as small farm flocks.

Increasing population and greater per capita spendable income are now accelerating the demand for beef. This demand is being met in part by a rapid increase in the number of cattle feed lots for fattening livestock, as well as increased acreage of irrigated pasture to increase the number of animals produced. Increased demand for beef was reflected in higher prices for livestock. Oregon's 1970 livestock receipts of $268 million were 4% above those of 1969*.

The unsettled condition of the livestock industry in Oregon is well demonstrated by the drastic changes in livestock income in various counties in the 1964-1969 period as shown in Table 55. It shows that in some eastern Oregon counties other industries and agricultural products are replacing livestock as the major source of personal income. This is most apparent in Baker County. On the other hand livestock is becoming of much greater economic significance in Gilliam and Jefferson Counties. This is in spite of the fact that there was a decline in acreage of both total irrigated acres and irrigated pasture in this time frame. In both the Medford and Roseburg districts income from

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*"Economic Review of Agriculture", Oregon State University, 9/1/71.

Table 54

Livestock Ranch Consolidation Trends in Oregon*

	Number of Ranches 1964			Number of Ranches 1964			1964-1969 % Change in No. Cattle Ranches
County	Cattle	Sheep	Total	Cattle	Sheep	Total	
Baker District							
Baker	379	171	550	274**	131	405	-26.4
Morrow	190	49	239	133**	43	176	-26.4
Umatilla	493	87	580	284	80	364	-37.2
Union	316	81	397	205	75	280	-29.5
Wallowa	321	170	491	241	139	380	-20.6
Subtotal	1,699	558	2,257	1,137	468	1,605	-28.9
Prineville District							
Crook	182	52	234	166	30	196	-16.2
Deschutes	223	69	292	88	39	127	-56.5
Gilliam	129	28	157	97	19	116	-26.1
Jefferson	160	23	183	96	15	111	-39.3
Sherman	144	15	159	79	12	91	-42.8
Wasco	266	45	311	173	41	214	-31.2
Wheeler	94	36	130	64	25	89	-31.5
Subtotal	1,198	268	1,466	763	181	944	-35.6
Burns District							
Grant	133	56	189	181	31	212	+12.2
Harney	219	32	251	194	31	225	-10.4
Subtotal	352	88	440	375	62	437	- 0.7
Lakeview District							
Klamath	475	154	629	284	112	396	-37.0
Lake	192	69	261	164	26	190	-27.2
Subtotal	667	223	890	448	138	586	-34.2
Vale District							
Malheur	600	119	719	336	77	413	-42.6
Medford District							
Jackson	417	101	518	195	66	261	-49.6
Josephine	122	59	181	44	34	78	-56.9
Subtotal	539	160	699	239	100	339	-51.5
Roseburg District							
Douglas	480	641	1,121	240	497	737	-34.3
TOTAL	5,535	2,057	7,592	3,538	1,523	5,061	-36.1

*Table 7 U.S. Census of Agriculture - Oregon 1972
**Data indicates switch from milk cows to beef

Table 55

Economic Trends in Livestock Production in Oregon 1964 to 1969

County	Personal Income 1964	Livestock Income 1964	% Income from Livestock	Personal Income 1969	Livestock Income 1969	Livestock Income % of Personal	1964-1969 % Change Livestock Income
Baker District							
Baker	29,080,000	7,866,593	27.1	47,435,000	8,049,356	17.0	-10.1
Morrow	9,900,000	2,255,463	22.8	13,360,000	2,907,109	21.8	- 1.0
Umatilla	99,730,000	10,460,761	10.5	150,411,000	22,132,010	14.7	+ 4.2
Union	38,400,000	3,436,273	8.9	59,269,000	5,136,438	8.7	- 0.2
Wallowa	13,580,000	3,087,722	22.7	17,370,000	5,387,184	31.0	+ 8.3
Subtotal	190,690,000	27,106,812	14.2	287,845,000	43,612,097	15.2	+ 1.0
Prineville District							
Crook	22,840,000	4,453,000	19.5	33,083,000	6,320,845	19.1	- 0.4
Deschutes	60,790,000	2,984,204	4.9	92,276,000	2,138,843	2.3	- 2.6
Gilliam	11,120,000	1,505,873	13.5	7,955,000	2,329,342	29.3	+15.8
Jefferson	22,780,000	5,624,880	24.7	27,123,000	9,856,040	36.3	+11.6
Sherman	11,720,000	1,004,258	8.6	11,060,000	856,410	7.7	- 0.9
Wasco	49,230,000	1,853,095	3.8	64,400,000	2,714,957	4.2	+ 0.4
Wheeler	4,860,000	1,146,969	23.6	5,765,000	1,742,828	30.2	+ 6.6
Subtotal	183,340,000	18,572,279	10.1	241,662,000	25,959,265	10.7	+ 0.6
Burns District							
Grant	17,370,000	3,685,744	21.2	24,869,000	5,841,391	23.5	+ 2.3
Harney	16,500,000	4,432,951	26.9	25,619,000	6,824,388	26.6	- 0.3
Subtotal	33,870,000	8,118,695	24.0	50,488,000	12,665,779	25.1	+ 1.1
Lakeview District							
Klamath	110,550,000	12,243,778	11.1	159,205,000	13,699,914	8.6	- 2.5
Lake	16,440,000	4,215,453	25.6	22,633,000	6,381,781	28.2	- 2.6
Subtotal	126,990,000	16,459,231	13.0	181,838,000	20,081,695	11.0	- 2.0
Vale District							
Malheur	48,140,000	10,787,986	22.4	69,904,000	15,228,682	21.8	- 0.6
Medford District							
Jackson	193,400,000	2,277,047	1.2	274,888,000	3,361,734	1.2	0
Josephine	67,260,000	761,013	1.1	92,210,000	827,283	0.9	- 0.2
Subtotal	260,660,000	3,038,060	1.2	367,098,000	4,189,017	1.1	- 0.1
Roseburg District							
Do[illegible]las	169,090,000	1,542,936	0.9	225,764,000	2,913,733	1.3	+ 0.4
TOTAL - [illegible]ll State	4,901,000,000	101,941,198	2.1	7,261,000,000	144,054,844	2.0	- 0.1

livestock is dwarfed by the high contribution from the wood products industry. Livestock is of even less economic importance to the economy in the balance of the western Oregon counties. On a statewide basis there was only minor slippage of the economic contribution from the livestock industry.

2. Value of BLM Forage Resource

Table 56 shows the number of cattle by county and the approximate number licensed or permitted to use BLM forage. A recent Forest Service study finds that comparable grazing lands in private ownership yield a return of $3.65 per a.u.m.[40] Since these private ranges may be more intensively developed, have a higher range carrying capacity, or may include riding to control livestock movements, the private lands are deemed worth 64¢ per a.u.m. more than the public lands. This equals a value of $3.00 per a.u.m. for the forage on the public lands compared to a rental charge of 44¢ per a.u.m. in 1970. The $2.56 difference between BLM rental charge and market value times the number of a.u.m.'s licensed in Malheur County equals $1,042,309. Capitalized at 5.5% interest, this equals a value held by the ranchers of all the Sec. 3 leases in the county of $18,951,072 over and above the direct benefits from grazing use of the land. This sum divided by the 266 ranchers equals a capitalized lease value of $71,245 average per rancher by virtue of the grazing fees being below market value. This subsidy to the ranchers is gradually being reduced as the grazing fee rates are increased from year to year.

Based on the 1972 rental rate of 66¢ per a.u.m. and a carrying capacity of 10 acres per a.u.m., capitalized at 5.5% indicates a BLM grazing land value of only $1.20 per acre, compared to market values of from $5.00 to $20.00 per acre. As an investment, grazing land worth $10.00 an acre would be expected to make an annual return of 50¢ instead of the 6.6¢ per acre now being received.

Table 57 shows that the livestock industry in both the Burns and Vale districts, as well as that in Lake County in the Lakeview district, are highly dependent on BLM forage. The local economies of these counties are somewhat dependent. In the Prineville district only livestock people in Crook and Deschutes County show much dependency on BLM forage. The livestock industry shows very little dependency on BLM forage in other counties in Oregon. Aside from Malheur, Harney, and Lake County, none of the local economies show significant dependency on BLM forage.

The year 1970 was used in evaluating benefits from BLM forage both because census, income, and employment data were available for that year and because economic benefits from other BLM resources were based on 1970 data. to the extent possible.

Table 56

Value of BLM Range Resource By County and BLM District, 1970

District & County	% of Districts Land in County	No. Cattle & Horses: Total in County	No. Cattle & Horses: BLM Licensed	No. Sheep & Goats: Total in County	No. Sheep & Goats: BLM Licensed	Total BLM Licensed Animal Units	Animal Unit Months Forage Used: Total Cattle & Horses	Animal Unit Months Forage Used: BLM** Licensed Cattle & Horses	Animal Unit Months Forage Used: Total Sheep & Goats	Animal Unit Months Forage Used: BLM** Licensed Sheep & Goats	Value of BLM Forage*: To Ranchers	Value of BLM Forage*: Community Economic Value[2]	No. Ranchers Using BLM Forage	Average Annual Benefit Per Rancher	Total Net Benefit To Ranchers	Capitalized Value of BLM Permits[3]
BAKER DISTRICT																
Baker	82	106,000	29,283	19,000	6,842	30,651	1,272,000	44,187	45,600	477	133,992	233,146			114,340	$ 2,078,909
Morrow	9	36,000	3,077	10,000	0	3,077	432,000	4,553	24,000	0	13,659	23,767			11,656	211,927
Umatilla	3	93,000	958	26,000	0	958	1,116,000	1,446	62,400	0	4,338	7,548			3,702	67,309
Union	1	45,000	532	4,500	0	532	540,000	803	10,800	0	2,409	4,192			2,056	37,381
Wallowa	5	52,000	1,705	22,000	7,000	3,105	624,000	2,571	52,800	500	9,213	16,030			7,862	142,945
Subtotal	100	332,000	35,495	81,500	13,842	38,323	4,056,000	53,560	195,600	977	163,611	284,683	299	547	139,616	2,538,471
PRINEVILLE																
Crook	42	52,000	9,521	4,000	500	9,621	624,000	38,118[1]	9,600	0	114,354	198,976			97,274	1,768,618
Deschutes	40	32,000	9,111	4,000	500	9,211	384,000	37,146	9,600	0	111,438	193,902			95,094	1,728,981
Gilliam	2	26,000	500	4,800	0	500	312,000	2,000	11,520	0	6,000	10,440			5,101	92,745
Jefferson	2	48,000	478	2,000	0	478	576,000	2,000	4,800	0	6,000	10,440			5,142	93,490
Sherman	4	15,000	820	400	0	820	180,000	4,070	960	0	12,210	21,245			10,739	195,254
Wasco	3	35,000	660	5,500	0	660	420,000	2,693	13,200	0	8,079	14,057			6,894	125,345
Wheeler	7	24,000	1,685	7,000	1,000	1,885	288,000	6,838	16,800	0	20,514	35,694			17,490	318,000
Subtotal	100	232,000	22,777	27,700	2,000	23,175	2,784,000	92,865	66,480	0	278,595	484,754	179	2,556	237,734	4,322,433
VALE DISTRICT																
Malheur	100	175,000	67,904	23,000	17,550	71,414	2,100,000	400,858	55,200	6,294	1,221,456	2,125,333	266	4,592	1,042,309	18,951,072
BURNS DISTRICT																
Grant	4	61,000	30,000	5,000	6,300	31,260	732,000	28,896	12,000	0	86,688	150,837	155	559	73,974	1,344,981
Harney	96	97,000	53,951	9,000	7,340	55,419	1,164,000	214,966	21,600	7,107	666,219	1,159,221	174	3,829	568,507	10,336,490
Subtotal	100	158,000	83,951	14,000	13,640	86,679	1,896,000	243,862	33,600	7,107	752,907	1,310,058	329	2,288	642,481	11,681,471
LAKEVIEW DISTRICT																
Klamath	6	127,000	3,552	32,000	0	3,552	1,524,000	12,211	76,800	0	36,633	63,741	70	523	31,260	568,363
Lake	94	88,000	39,768	4,000	1,110	39,990	1,056,000	136,707	9,600	50	410,271	713,872	98	4,186	350,098	6,365,418
Subtotal	100	215,000	43,320	36,000	1,110	43,542	2,580,000	148,918	86,400	50	446,904	777,613	168	2,660	381,358	6,933,781
MEDFORD DIST.	100	57,000	10,125	7,000	1,700	10,465	684,000	22,944	16,800	1,700	73,932	128,642	151	490	56,435	1,026,090
ROSEBURG DIST.	100	42,000	2,500	110,000	1,036	2,707	504,000	3,657	264,000	1,036	14,079	24,497	57	247	10,747	195,400
COOS BAY DIST.	100	59,000	95	46,000	0	95	708,000	505	110,400	0	1,515	2,636	2	758	1,156	21,018
EUGENE DIST.	100	42,000	267	25,000	0	267	504,000	920	60,000	0	2,760	4,802	11	251	2,107	38,309
SALEM DIST.	100	291,000	141	159,300	0	141	3,492,000	540	382,320	0	1,620	2,819	8	203	1,237	22,490
STATE TOTAL		1,603,000	266,575	529,500	56,723	276,808	19,308,000	968,629	1,270,800	17,164	2,957,379	5,145,837	1,400	2,112	2,515,180	45,730,535

*Based on average commercial value of $3,00 per a.u.m. (rate on comparable private lands is $3.64 per a.u.m.[40]) **From 1970 calendar year district annual reports. 1 - Proportioned from Table 23, Prineville District Economic Supplement, as related to acreage BLM land in county. 2 - Based on an economic multiplier of 1.74. 3 - @ 5.5% interest.

82201

Table 57

Economic Dependence of Oregon Counties on BLM Livestock Forage

District & County	Total	Agricult.	Total	Livestock	% Income from Livestock	Proportion Livestock Employment	% Total Employment	Total 1968 Personal Income	% Community Dependence on Livestock	Total Animal Units in County	Animal Units BLM Forage	% Dependency on BLM		Livestock Employment Creditable BLM	Livestock Employment Wages Creditable BLM*	Community Income Benefit**	% Personal Income from BLM Forage
												Livestock Industry	Local Economy				
BAKER DISTRICT																	
Baker	5,450	1,040	$10,096,000	$ 7,720,000	76.5	796	14.6	43,530,000	17.7	109,800	3,722	3.4	0.6	28	169,120	304,416	0.7
Morrow	1,650	600	7,696,000	2,961,000	38.5	231	14.0	12,260,000	24.2	38,000	380	1.0	0.3	3	16,992	30,586	0.3
Umatilla	17,480	2,550	33,997,000	11,240,000	33.1	844	48.3	138,030,000	8.1	98,200	120	0.1	0	1	5,990	10,782	0
Union	7,790	980	10,462,000	4,214,000	40.3	395	5.1	54,390,000	7.7	45,900	67	0.1	0	0	0	0	0
Wallowa	2,240	750	6,940,000	4,273,000	61.6	462	20.6	15,940,000	26.8	56,400	256	0.5	0.1	2	11,370	20,466	0.1
Subtotal	34,610	5,920	69,191,000	30,408,000	43.9	2,728	7.9	264,150,000	11.5	348,300	4,545	1.3	0.2	34	203,472	366,250	0.1
PRINEVILLE DISTRICT																	
Crook	4,020	620	8,366,000	5,399,000	64.5	400	10.0	30,360,000	17.8	52,800	3,177	6.0	1.1	25	161,625	290,925	1.0
Deschutes	12,090	720	6,587,000	2,029,000	30.8	222	1.8	84,680,000	2.4	32,800	3,100	9.4	0.2	22	132,814	239,065	0.3
Gilliam	891	370	6,150,000	2,357,000	38.3	142	15.9	7,300,000	32.3	26,960	170	0.6	0.2	1	4,505	8,109	0.1
Jefferson	3,650	860	18,644,000	5,433,000	29.1	250	6.8	24,890,000	21.8	48,400	163	0.3	0.1	1	5,760	10,368	0
Sherman	2,860	139	5,871,000	1,207,000	20.6	29	1.0	10,150,000	11.9	15,080	399	2.2	0.2	1	9,010	16,218	0.2
Wasco	8,009	1,311	9,786,000	2,284,000	23.2	305	3.8	59,100,000	3.9	36,100	224	0.6	0	2	12,520	22,536	0
Wheeler	740	260	2,422,000	1,946,000	80.3	209	28.2	5,290,000	36.8	25,400	573	2.2	0.9	5	35,530	63,954	1.2
Subtotal	32,260	4,280	57,826,000	20,655,000	35.7	1,557	4.8	221,770,000	9.3	237,540	7,806	3.3	0.3	57	361,764	651,175	0.3
VALE DISTRICT																	
Malheur	7,211	2,380	43,305,000	14,282,000	33.0	785	10.9	64,150,000	22.3	179,600	33,910	18.9	4.3	152	782,648	1,408,766	2.2
BURNS DISTRICT																	
Grant	2,840	510	5,643,000	5,280,000	93.6	477	16.8	22,820,000	23.1	62,000	2,408	3.9	0.9	19	121,011	217,820	0.9
Harney	3,080	550	8,801,000	7,966,000	90.5	498	16.2	23,510,000	33.9	98,800	18,506	18.7	6.5	95	593,370	1,068,066	4.5
Subtotal	5,920	1,060	14,444,000	13,246,000	91.7	975	16.5	46,330,000	28.6	160,800	20,914	13.0	3.8	114	714,381	1,285,886	2.8
LAKEVIEW DISTRICT																	
Klamath	19,160	1,640	27,052,000	15,078,000	55.7	913	4.8	146,100,000	10.3	133,400	1,018	0.8	0.1	7	43,666	78,599	0.1
Lake	2,760	620	7,847,000	6,663,000	84.9	526	19.1	20,770,000	32.1	88,800	11,400	12.8	4.2	68	420,648	757,166	3.6
Subtotal	21,920	2,260	34,899,000	22,741,000	65.2	1,439	6.6	166,870,000	13.6	222,200	12,418	5.6	0.8	75	464,314	835,765	0.5
MEDFORD DIST.	48,160	4,640	21,333,000	4,268,000	20.0	928	1.9	336,880,000	1.3	58,400	2,054	3.5	0.1	36	229,320	412,776	0.1
ROSEBURG DIST.	27,470	1,390	7,612,000	2,897,000	38.1	530	1.9	207,180,000	1.4	42,000	390	0.9	0	5	33,565	60,417	0
COOS BAY DIST.	25,410	970	10,444,000	2,563,000	24.5	238	0.9	203,480,000	1.3	59,000	42	0.1	0	0	0	0	0
EUGENE DIST.	84,400	4,150	19,998,000	3,080,000	15.4	639	0.8	592,810,000	0.5	42,000	77	0.2	0	1	6,476	11,657	0
SALEM DIST.	573,758	17,064	216,216,000	18,240,000	8.4	1,433	0.2	4,515,960,000	0.4	291,000	45	0	0	0	0	0	0
Subtotal	897,359	43,624	275,603,000	31,048,000	26.6	3,768	1.2	5,856,310,000	2.0	492,400	2,608	1.3	0	42	269,361	484,850	0
STATE TOTAL	999,280	59,524	495,268,000	131,920,000		11,020		6,619,600,000		1,640,840	82,201			474	2,795,940	5,032,692	

*Based on average annual payroll.[4/] **Based on a household economic multiplier of 1.80.[42/]

***Includes self-employed and unpaid family & domestic.

Wildlife

3. Future Demand for Forage on Public Lands

Two things will affect future demand for the forage resource on public lands. The factor causing the most immediate change is the programmed increase in BLM grazing fees. Rancher demand should decrease as BLM fees approach market values. Ranchers may find it more profitable to increase the productivity of their own lands through range improvements or development of irrigated pastures than to pay market value for grazing use of the public lands.

The second factor is the increasing demand for beef in the market place. Tangible evidence of the increasing demand for beef is the number of cattle being processed through feedlots in Oregon. Oregon cattle feeding during the July-September quarter more than doubled between 1961 and 1966.[50/] California provides a growing market for Oregon beef. In the 1963-67 period, 38% of the slaughter cattle shipped out of state went to California. Table 58 shows that consumption of beef is expected to expand from 107 lbs. per capita in 1970 to 117 lbs. per capita by 1980.[51/] Total domestic beef demand is expected to be 40 to 50% above the high 1964 production. Beef cattle requirements to support the 1970 market demand was about 85,900,000. Forecast demand by 1980 is expected to be 104,400,000 cattle, a 32% increase. By year 2000 the market will require 135,200,000 head of beef cattle, an 85% increase over 1970 demand.[51/] Increased numbers of livestock on the ranches will no doubt result in demand for increased use of the public grazing lands.

4. Economic Benefits From Increased Supplies of BLM Forage

The 32% projected increase in numbers of beef cattle by 1980 will require additional livestock feed. Perhaps BLM can provide more forage through range improvement and more intensive management. Table 59 shows the anticipated economic benefit from a 20% increase in forage supplies and permitted range use. Such an increase in grazing capacity would have a measurable beneficial impact on the economies of only Harney, Lake, and Malheur Counties.

D. Fish and Wildlife Resource Use on BLM Managed Lands in Oregon

1. Consumptive Use

Data from BLM districts show a total of 1,100,000 fishing recreation visits and 957,000 hunting recreation visits to BLM managed lands in the year from July 1970 to July 1971.[52/] When sportsmen embark on a hunting or fishing trip, hunting or fishing is generally the main purpose of the trip. Camping and picnicking are incidental thereto. Considering the travel time required to reach hunting and fishing areas, a hunting or fishing recreation visit is considered herein as synonymous with a recreation day unit of measurement.

Table 58

Projected Demand for Beef in the United States[51]

Year	Population (1,000)	Per Capita Consumption (Pounds)	Carcass Weight Million lbs.	Percent Increase Over 1960	Total Beef Cattle in U.S. 1000 Head
1970	204,800	107	22,030	33	85,900
1980	233,140	117	27,277	65	104,400
2000	290,902	124	36,072	118	135,200

Table 59

Economic Value to Local Communities from a 20% Increase in BLM Forage Production

BLM District & County	Total Livestock in County a.u.m.'s	BLM Licensed Animal Unit Mos.	% Dependency on BLM Lands Annual Basis	1970 Livestock Sales	% Creditable BLM Lands	Economic Benefit Credit* BLM	Rancher Income from a 20% Increase in Beef Sales	Community Economic Benefit from Increase	Community Benefit Due to 20% Increase	% Increase in Personal Income
BAKER DISTRICT										
Baker	1,317,600	44,664	3.4	$ 8,568,000	$ 291,312	$ 506,883	349,574	$ 608,259	$ 101,376	0.2
Morrow	456,000	4,553	1.0	3,221,000	32,210	56,045	38,652	67,254	11,209	0.1
Umatilla	1,178,400	1,446	0.1	13,145,000	13,145	22,872	15,774	27,447	4,575	0
Union	550,800	803	0.1	4,280,000	4,280	7,447	5,136	8,937	1,490	0
Wallowa	676,800	3,071	0.5	4,705,000	23,525	40,934	28,230	49,120	8,196	0
Subtotal	4,179,600	54,537	1.3	33,919,000	364,472	634,181	437,366	761,017	126,846	0
PRINEVILLE DISTRICT										
Crook	633,600	38,118	6.0	4,281,000	256,860	446,936	308,232	536,324	89,388	0.3
Deschutes	393,600	37,146	9.4	2,510,000	235,940	410,536	283,128	492,643	82,107	0.1
Gilliam	323,520	2,000	0.6	3,163,000	18,978	33,022	22,774	39,627	6,605	0.1
Jefferson	580,800	2,000	0.3	5,482,000	16,446	28,616	19,735	34,339	5,723	0
Sherman	180,960	4,070	2.2	1,504,000	33,088	57,573	39,706	69,088	11,515	0.1
Wasco	433,200	2,693	0.6	3,963,000	23,778	41,374	28,534	49,649	8,275	0
Wheeler	304,800	6,838	2.2	2,344,000	51,568	89,728	61,882	107,675	17,947	0.3
Subtotal	2,850,480	92,865	3.3	23,247,000	636,658	1,107,785	763,991	1,329,345	221,560	0.1
VALE DISTRICT										
Malheur	2,155,200	407,152	18.9	16,537,000	3,125,493	5,438,358	3,750,592	6,526,030	1,087,672	1.7
BURNS DISTRICT										
Grant	744,000	28,896	3.9	5,926,000	231,114	402,138	277,337	482,566	80,428	0.4
Harney	1,185,600	222,073	18.7	8,538,000	1,596,606	2,778,094	1,915,927	3,333,713	555,619	2.4
Subtotal	1,929,600	250,969	13.0	14,464,000	1,827,720	3,180,232	2,193,264	3,816,279	636,047	1.4
LAKEVIEW DISTRICT										
Klamath	1,600,800	12,211	0.8	17,464,000	139,712	243,099	167,654	291,718	48,619	0
Lake	1,065,600	136,757	12.8	7,313,000	936,064	1,628,751	1,123,277	1,954,502	325,751	1.6
Subtotal	2,666,400	148,968	5.6	24,777,000	1,075,776	1,871,850	1,290,931	2,246,220	374,370	0.2
MEDFORD DISTRICT	700,800	24,644	3.5	5,065,000	177,275	308,459	212,730	370,150	61,691	0
East. Ore. TOTAL	14,482,080	979,135	6.8	118,009,000	7,207,394	12,540,865	8,648,874	15,049,041	2,508,186	

*Using an input-output multiplier of 1.74 (including household impact).[42]/

In 1969, 349,651 licensed hunters killed 101,500 deer; 9,918 elk; 3,600 bear; 440 antelope; and 4 bighorn sheep in Oregon, providing 1,925,371 recreation days hunting.37/ (See Table 60) Hunters of small game and birds numbered 88,882. They spent 741,530 days in the field. There were 58,117 hunters for waterfowl, an increase from the 49,070 hunters the previous year. Goose production in 1970 was up 6.5% over that in 1969, while duck production was down 11.9%. There were roughly twice as many hunter days spent in pursuit of big game than were spent hunting small game.

In 1970 there were a total of 372,280 licensed hunters and 801,545 licensed fishermen. There were 6,307 non-resident hunters and 10,482 non-resident fishermen. There were 353,133 salmon anglers which is 44% of all fishermen in the state. 98% of the hunters bought special tags for big game.

Anadromous fishing opportunity exists in the Deschutes and John Day Rivers in the Prineville District and in the Snake, Grande Ronde, and Wallowa Rivers in the Baker district. Rivers carrying anadromous fish are found in all western Oregon BLM districts. These include the Willamette, Sandy, Rogue, McKenzie, Nehalem, Wilson, Trask, Nestucca, Siletz, Yaquima, Alsea, Siuslaw, Smith and Umpqua.

Table 60 shows the hunting pressure for big game in the area of each BLM district in Oregon. The Baker District area showed the highest deer hunter success. The Eugene District in western Oregon had the next highest ratio. The Baker District area also had the greatest number of elk hunters. The Salem District in western Oregon had the next highest.

Table 61 shows the hunting pressure for upland birds by BLM district. The Baker District area of northeast Oregon provides the greatest number of hunter days for upland birds followed closely by the North Willamette Valley encompassing the Salem District.

The most duck hunter days were spent in the upper Willamette Valley with the next largest number in our Lakeview District as shown in Table 62. The most goose hunting took place in the Lakeview District with the next highest number in the upper Willamette Valley.

Table 60

Big Game Hunting in Oregon in 1969 by Area and BLM Districts

BLM District & Game Mgmt. Unit	Number Deer Hunters	Hunter Days-Deer	Deer Kill	Deer Kill Per Square Mile	Percent Hunter Success	Number of Elk Hunters	Elk Hunter Days	Percent Hunter Success
SALEM DISTRICT								
Coast Resource Area								
Alsea Unit	7,700	41,660	4,480	2.08	22	760	2,940	11
Clatsop U.	3,610	22,760	320	0.33	9	7,040	31,840	10
Nestucca U.	710	4,290	120	0.35	17	130	1,430	4
Polk U.	2,730	12,350	1,030	1.71	15	0	0	0
Trask U.	4,350	22,380	1,570	1.5	13	680	1,940	9
Willamette U.	2,990	18,770	1,100	0.66	13	200	430	13
Wilson U.	2,690	12,160	490	0.84	18	2,040	9,760	10
Subtotal	24,780	134,370	9,110		37	10,850	48,340	
Cascade Resource Area								
Santian U.	10,840	56,640	3,950	0.89	15	140	1,000	11
District Total	35,620	191,010	13,060		37	10,990	49,340	
EUGENE DISTRICT								
McKenzie U.	11,050	63,040	5,390	1.32	18	1,510	6,120	9
Siuslaw U.	3,330	17,850	1,480	1.51	26	0	0	0
District Total	14,380	80,890	6,870		48	1,510	6,120	
ROSEBURG DISTRICT								
Dixon U.	5,460	33,190	2,340	1.00	35	370	1,730	9
Elkton U.	1,890	11,310	750	0.79	36	970	4,220	19
Melrose U.	4,480	26,840	1,820	1.50	34	750	2,120	7
Powers U.	2,640	17,410	1,150	1.16	41	540	2,510	10
District Total	14,470	88,750	6,060		42	2,630	10,580	
MEDFORD DISTRICT								
Applegate U.	2,790	17,640	1,050	0.77	32	0	0	0
Chetco (½)	1,120	7,805	360	0.43	32	0	0	0
Evans Cr. U.	1,720	9,920	650	0.81	32	0	0	0
Rogue U.	6,690	43,370	1,940	1.09	25	430	1,800	7
Keno U.	1,320	7,280	240	0.24	17	70	310	13
District Total	13,640	86,015	4,240		31	500	2,110	

Table 60 (Cont.)

Big Game Hunting in Oregon in 1969 By Area and BLM Districts*

BLM District & Game Mgmt. Unit	Number Deer Hunters	Hunter Days-Deer	Deer Kill	Deer Kill Per Square Mile	Percent Hunter Success	Number of Elk Hunters	Elk Hunter Days	Percent Hunter Success
COOS BAY DISTRICT								
Chetco U. (½)	1,120	7,805	360	.43	32	0	0	0
Sixes U.	2,770	16,060	660	.68	23	0	0	0
Keno U.	1,320	7,280	240	.24	17	70	310	13
District Total	5,210	31,145	1,260		24	70	310	13
PRINEVILLE DISTRICT								
Deschutes U.	10,240	60,080	2,480	1.74	23	90	700	11
Grizzly U.	3,880	18,480	1,180	0.79	30	40	350	20
Maupin U.	680	2,770	210	0.33	31	0	0	0
Maury U.	2,770	12,760	1,000	0.96	36	20	140	0
Metalius U.	2,410	10,560	660	0.85	27	0	0	0
Ochoco U.	12,860	57,010	3,910	2.48	30	600	2,840	20
Paulina U.	6,000	30,640	1,530	0.75	26	0	0	0
Sherman U.	1,490	6,210	640	0.32	43	0	0	0
Wasco U.	4,480	20,910	840	0.85	17	690	4,360	20
Wheeler	7,580	32,960	3,190	2.37	42	260	1,570	17
District Total	52,390	252,380	15,640		30	1,700	9,960	
LAKEVIEW DISTRICT								
Fort Rock U.	6,550	32,260	1,770	0.93	27	0	0	0
Klamath U.	6,420	34,050	2,100	1.70	33	0	0	0
Sprague U.	4,350	22,270	1,160	1.36	27	0	0	0
Hart Mt.	790	3,050	320	0.12	38	0	0	0
Interstate U.	5,770	36,360	2,090	0.96	36	0	0	0
Silver Lake U. (½)	2,940	15,205	890	2.03	30	0	0	0
Wagontire (¼)	107	645	20	.03	19	0	0	0
Warner U.	2,180	11,080	1,060	1.20	48	0	0	0
District Total	29,107	154,920	9,410		32	0	0	0
VALE DISTRICT								
Malheur U.	3,990	19,010	1,630	0.57	41	480	4,550	21
Owyhee U.	840	3,370	300	0.10	36	0	0	0
Whitehorse U.	1,110	4,680	610	0.13	55	0	0	0
District Total	5,940	27,060	2,540		43	480	4,550	21

*Derived from State Game Department data.

Table 60 (Cont.)

Big Game Hunting in Oregon in 1969 By Area and BLM Districts*

BLM District & Game Mgmt. Unit	Number Deer Hunters	Hunter Days-Deer	Deer Kill	Deer Kill Per Square Mile	Percent Hunter Success	Number of Elk Hunters	Elk Hunter Days	Percent Hunter Success
BAKER DISTRICT								
Baker	6,380	31,300	3,660	2.44	56	2,610	21,630	17
Catherine Cr.	4,650	23,260	2,770	4.81	60	770	6,950	21
Chesnimnus	1,940	8,600	1,000	1.57	52	2,930	18,330	16
Columbia B.	510	2,070	210	0.08	41	0	0	0
Desolation	1,900	9,790	1,070	1.55	56	2,740	18,470	18
Heppner	9,300	45,610	3,770	2.53	40	2,610	16,940	14
Imnaha	3,950	17,940	2,200	5.46	56	1,820	12,370	21
Keating	3,710	17,790	2,630	3.30	68	850	2,960	26
Lookout Mt.	1,940	7,450	1,330	2.49	69	70	350	21
Minam	1,770	9,300	1,010	1.11	42	1,770	11,270	22
Murderer's Cr.	6,680	32,690	3,250	2.67	48	1,020	4,770	23
Sled Springs	3,610	17,580	2,050	2.37	57	3,760	19,060	17
Snake R.	3,270	17,180	2,100	2.76	61	2,040	11,840	21
Starkey	2,480	13,010	870	0.57	34	5,310	34,880	13
Ukiah	3,350	16,830	1,130	1.49	34	3,720	23,020	16
Umatilla	3,910	20,480	1,240	1.65	31	4,340	27,730	12
Walla Walla	790	4,630	270	0.96	34	1,510	8,160	21
Wenaha	730	3,880	390	0.95	53	4,330	26,500	13
District Total	60,870	299,390	30,950		50.8	42,200	265,230	
BURNS DISTRICT								
Northside U.	6,850	32,050	3,590	3.33	46	1,010	7,050	27
Juniper	320	1,450	80	0.03	25	0	0	0
Malheur R.	3,990	19,010	1,630	0.57	41	480	4,550	21
Silver L. (½)	2,940	15,205	890	2.03	30	0	0	0
Silvies	4,490	22,280	2,220	1.29	49	280	2,510	26
Steens Mt.	2,350	9,450	1,280	0.68	54	0	0	0
District Total	20,940	99,445	9,690		46	1,770	14,110	
TOTAL - Oregon	264,900	1,492,690	101,500		38	66,000	381,940	

Table 61

Upland Bird Hunting In Oregon In 1969 By Area And BLM Districts

	Pheasants			Chukar Partridge			Hungarian Partridge			
Area	Hunters	Harvest	Days Hunted	Hunters	Harvest	Days Hunted	Hunters	Harvest	Days Hunted	Total Days Hunted
SALEM DISTRICT										
N. Willamette	22,380	48,070	97,490							97,490
EUGENE DISTRICT										
S. Willamette	10,580	19,100	49,820							49,820
ROSEBURG DISTRICT										
Umpqua	1,560	3,000	6,440							6,440
MEDFORD DISTRICT										
Rogue	5,250	12,910	24,760							24,760
PRINEVILLE DISTRICT										
Lower John Day				1,690	11,550	6,140				
Deschutes	5,510	16,430	21,550	4,430	24,000	14,600	1,140	2,130	3,510	45,800
Subtotal				6,120	35,550	20,740				
LAKEVIEW DISTRICT										
Klamath	2,520	6,340	11,970							11,970
BAKER DISTRICT										
Col. Basin	7,640	33,960	40,560	1,730	9,450	7,070	990	2,390	3,930	51,560
Lower Snake				5,290	40,360	19,880				19,880
Blue Mt.	5,540	21,830	24,430				2,060	6,450	9,200	33,630
Subtotal	13,180	55,790	64,990	7,020	49,810	26,950	3,050	8,840	13,130	105,070
VALE DISTRICT										
Malheur	9,070	58,330	41,690	6,270	48,540	24,040	850	2,790	3,500	69,230
BURNS DISTRICT										
Upper John Day				430	3,370	2,030				2,030
Great Basin	1,790	3,880	6,740	2,390	22,760	8,340	120	410	430	15,510
Subtotal				2,820	26,130	10,370				17,540
TOTAL	71,840	223,850	325,450	22,340	160,030	82,100	5,160	14,170	20,570	428,120

Table 62

Waterfowl Hunting in Oregon by County and BLM District 1969

	Ducks			Geese			Total Days
County	Hunters	Hunter Days	Harvest	Hunters	Hunter Days	Harvest	Hunted
SALEM DISTRICT							
Coast Resource Area							
Benton	1,560	12,120	17,860	1,170	5,400	3,030	17,520
Clatsop	1,340	12,670	20,970	410	3,070	640	15,740
Columbia	4,030	37,980	68,340	1,490	15,510	3,260	53,490
Lincoln	430	2,280	2,920	0	0	0	2,280
Polk	1,900	12,480	15,490	1,300	7,060	3,010	19,540
Tillamook	1,190	8,490	14,910	360	2,820	380	11,310
Washington	1,580	10,090	17,620	340	2,580	430	12,670
Yamhill	1,110	6,780	11,480	380	2,220	280	9,000
Subtotal	13,140	102,890	169,590	5,450	38,660	11,030	141,550
Cascade Resource Area							
Clackamas	660	4,610	3,860	110	510	40	5,120
Linn	2,150	17,260	21,040	980	6,000	4,950	23,260
Marion	2,330	16,680	21,680	750	4,820	1,840	21,500
Multnomah	3,500	23,700	46,380	830	6,270	1,490	29,970
Subtotal	8,640	62,250	92,960	2,670	17,600	8,320	79,850
Dist. Total							
EUGENE DISTRICT							
Lane	4,010	32,050	33,450	880	8,260	2,070	40,310
ROSEBURG DISTRICT							
Douglas	920	7,960	12,930	20	40	20	8,000
COOS BAY DISTRICT							
Coos	2,050	17,070	28,950	40	60	20	17,130
Curry	190	1,540	1,750	60	960	60	2,500
Subtotal	2,240	18,610	30,700	100	1,020	80	19,630
MEDFORD DISTRICT							
Jackson	920	6,250	5,630	60	1,020	150	7,270
Josephine	230	1,070	830	0	0	0	1,070
Subtotal	1,150	7,320	6,460	60	1,020	150	8,340

Table 62 (Cont.)

Waterfowl Hunting in Oregon by County and BLM District 1969

	Ducks			Geese			Total Days
County	Hunters	Hunter Days	Harvest	Hunters	Hunter Days	Harvest	Hunted
PRINEVILLE DISTRICT							
Crook	900	7,590	9,200	260	680	90	8,270
Deschutes	1,900	11,690	12,820	1,020	6,930	1,050	18,620
Gilliam	130	450	750	190	790	810	1,240
Jefferson	430	3,200	3,710	130	810	60	4,010
Sherman	280	1,880	1,410	810	3,670	1,900	5,550
Wasco	510	3,010	1,200	320	1,430	240	4,440
Wheeler	150	380	380	150	450	190	830
Subtotal	4,300	28,200	29,470	2,880	14,760	4,340	42,960
BAKER DISTRICT							
Baker	960	4,350	7,300	360	1,540	150	5,890
Morrow	300	2,650	2,650	300	2,010	410	4,660
Umatilla	2,240	21,570	19,560	1,990	13,120	4,010	34,690
Union	1,150	6,440	6,210	260	1,390	40	6,480
Wallowa	510	4,570	4,860	190	1,600	110	6,170
Subtotal	5,160	39,580	40,580	3,100	19,660	4,720	57,890
LAKEVIEW DISTRICT							
Klamath	9,490	67,480	110,240	6,980	44,550	15,850	112,030
Lake	3,370	12,480	21,210	4,180	14,550	13,780	27,030
Subtotal	12,860	79,960	131,450	11,160	59,100	29,630	139,060
BURNS DISTRICT							
Harney	940	4,500	5,290	880	4,120	2,090	8,620
Grant	170	900	1,960	110	230	40	1,130
Subtotal	1,110	5,400	7,250	990	4,350	2,130	9,750
VALE DISTRICT							
Malheur	2,180	10,430	13,590	750	2,670	1,150	13,100
OREGON TOTAL	55,710	394,650	568,430	28,060	167,140	63,640	560,440

2. Non-Consumptive Wildlife Use

In addition to hunting and fishing consumption of wildlife, there are a great number of non-consumptive uses such as bird watching, photography, and nature enjoyment. A study made by the State of Washington Department of Game found there were about 3/4 the number of non-consumptive wildlife users as consumptive users.[54] Vegetation, topography, and other wildlife conditions in Washington are similar to those in Oregon and people interests in the outdoors are much the same. The relative number of non-consumptive to consumptive wildlife users are judged to be about the same for the two states. On the basis of the reported 957,000 consumptive wildlife recreation days creditable to BLM lands, there were about 700,000 recreation days of non-consumptive use. At a user value of $2 per day for this type of recreation, the wildlife resource on BLM lands yields an annual benefit of $1,400,000 from this type of use.[40] Capitalized at 5.5% this equals an additional resource value of $25,454,545 on the wildlife on BLM lands.

3. Economic Benefits from Wildlife

One approach to measuring economic benefits from hunting and fishing is measurement of impact on the economy of expenditures by non-local sportsmen bringing "new" money into an area. Studies made in Colorado show that non-resident hunters spent an average of $443 in the state and non-resident fishermen spent an average of $186.[53] In the State of Washington, such expenditures were $400 and $268 respectively. The Washington State Game Department study in 1964 found that expenditures by deer hunters averaged $7.01 per day, those of small game hunters $5.10 per day, those of waterfowl hunters $4.26 per day, and those engaging in non-harvest wildlife enjoyment $5.32 per day.[54] Average expenditures per day for trout stream fishing were $3.06.

Most hunting and fishing in eastern Oregon is by residents of the Willamette Valley going over to spend the weekend or their vacation. Many have campers or trailer houses or tents, thus reducing their expenditures in the use area. However many stay in motels and get their meals in local restaurants, making substantial contribution to the local economy. The 1970 State Highway Department survey of tourist expenditures found that the average daily expenditure per tourist was $10.24 per day. This average daily expenditure by tourists was brought to this low level because more than 21% took advantage of the outstanding camping facilities available in Oregon. For this reason it seems reasonable to assume that expenditures of hunters and fishermen away from home would be about the same. This is because of the distance driven to reach good hunting and fishing areas result in the same major expenditures as those of tourists, primarily auto expense, food and lodging. The $7.01 average daily expenditure by deer hunters in Washington State in 1964 updated by 25% to reflect cost of living increases gives a daily expenditure by deer hunters of $8.76. This is judged to be a more realistic determination

of local economic benefits from big game hunting than the $10.24 per day tourist expenditure. Updating the other type hunter expenditures by 25% gives a current expenditure of $6.38 per day for upland game hunting. $6.65 per day for non-harvest wildlife enjoyment and $3.83 per day for trout fishing.

However no data is available showing non-local hunting and fishing use apart from local use as needed to evaluate impact of "imported" money spent in the area. It is recognized that expenditures by local hunters and fishermen also benefit the economy since they would be spending the money to engage in these sports outside the economic area being examined were not the resource available for enjoyment within the area. Expenditures by local hunters and fishermen would be less than those of non-local people because cost of travel and living expense would be less. The average economic benefit would be less if the evaluation is applied to the total hunting and fishing days spent in the area. It is here that the monetary benefits for hunting and fishing as set in Senate Doc. 97 become important because these estimates are based on the value of the hunting or fishing experience to the sportsmen, i.e., what he would be willing to pay and probably does pay to engage in each sport. This provides a conservative reflection of the expenditures that are made. As with other resource conversion expenditures, these would have a multiplier effect on the economy as the money is respent in the area. The multiplier of 1.88* for the recreation sector developed in the Grant County input-output study is deemed applicable to the rest of the state since hunting and fishing expenditures (except for ocean fishing) are much the same throughout the state. Based on this approach, Table 63 shows the big game wildlife resource on BLM lands in Oregon yield an annual benefit of $12,702,068 from both consumptive and non-consumptive wildlife use. On the same basis, the 1,100,000 fishermen days on BLM lands resulted in an initial expenditure of $2,750,000 with an impact on the economy of $5,170,000. Total economic benefit from the Fish and Wildlife resource on BLM lands in Oregon equalled $17,872,068 in FY 1971. This can be compared to an economic benefit of $5,111,085 from livestock grazing. This is not surprising since Game Department surveys find that 60% of the deer; 70% of the elk; and 90% of the antelope are harvested on Federal lands (Forest Service, BIA and BLM).53/ This is supported by the study which found that 53% of the deer; 63% of the elk; and 81% of the antelope get their forage from Federal lands. Also 43% of the big game animals in Oregon are found to winter on Federal lands.53/

Another method of evaluating the fishery resource on BLM lands in western Oregon is the cost of protecting and maintaining the resource. The recent reduction of BLM timber production acreage to provide protective stream corridors resulted from public demand for better protection of the fishery and water resource. The public feels that a quality fishery and water resource is worth at least as much as the value of the timber kept off the market and reserved in protective corridors. As shown in Tables 64 and 65 annuam value of the fishery resource trade

*based on the average of the Lodging sector and Cafe and Tavern sectors. if automotive were included the multiplier would be 1.5988.

off from timber harvest on western Oregon BLM lands is $118,757 in the Salem District, $86,225 in the Eugene District, $23,655 in the Roseburg District, $85,860 in the Coos Bay District, and $532,024 in the Medford District for a total annual fishery trade off of $846,521.

4. Future Demand for Fishing

Participation in recreational fishing is increasing much faster than in hunting.[55/] This is because fishing is a family recreation activity while hunting is mostly limited to the adult male population. Fishing is primarily a summer activity corresponding to family vacation periods while hunting is mostly confined to the fall and winter months. Fishing less frequently conflicts with other land or water uses whereas hunting areas are often restricted due to conflict with other land uses. Projected increased fishing demand is shown in Tables 66 and 67. A 39% increase in demand is expected by 1980 and an 84% increase by year 2000.[55/] On this basis we can expect a total of 1,529,000 recreation fishing days on BLM lands by 1980 and 2,024,000 by year 2000. Direct economic benefit from the 1980 use will be about $3,822,500 with a total impact on the economy of $7,186,300, considering the multiplier effect of the additional dollar expenditures.

Commercial fisheries demand will increase by 47% by year 1980 and by 95% by year 2000.[55/]

5. Future Demand for Hunting

Demand for hunting in Oregon is expected to increase as shown in Table 68.

The area of greatest increased hunting pressure will be southwest Oregon, followed closely by increased pressure in the Willamette Basin area. Hunter days on BLM land will increase to 1,185,720 by 1980 and to 1,578,100 by year 2000. Hunter expenditures creditable to BLM lands should be $6,640,000 in 1980 and $8,837,400 by year 2000. Benefits to the state economy from these expenditures will be about $12,483,000 in 1980 and $16,614,300 in year 2000 from the wildlife resources on BLM lands by virtue of the increased hunter use.

6. Future Demand for Non-Consumptive Wildlife Use

Non-consumptive enjoyment of wildlife is expected to increase faster than consumptive use. Based on existing percentage of non-consumptive to consumptive wildlife use (73%) there would be a total of 865,600 non-consumptive recreation days in 1980 and 1,152,000 non-consumptive recreation days in 1980 and 1,152,000 non-consumptive recreation days in year 2000 on BLM lands. This would result in an expenditure of $1,731,200 in 1980 and $2,304,000 in year 2000, resulting in local economic benefits of $3,254,656 and $4,331,520, respectively.

Table 63

Economic Benefits from Wildlife Resource on BLM Lands in Oregon

District	Big Game Use on BLM Lands**						Total* Big Game a.u.m.'s	Total** Big Game on BLM	% of Total Big Game on BLM	Hunter Days Creditable BLM Land	Hunter Expenditure Creditable BLM[1]	Non-Consumptive Wildlife Enjoyment[2] Recreation Days	Non-Consumptive Use[3] Expenditures	Total Wildlife Benefit	Economic Benefit To[4] Community
	Deer		Antelope		Elk										
	Number	a.u.m.'s	Number	a.u.m.'s	Number	a.u.m.'s									
Baker	16,000	22,450	50	n.a.	1,500	n.a.	22,450	17,550	6.0	57,420	$ 321,552	41,917	$ 278,748	$ 600,300	$1,128,564
Prineville	17,000	15,000	900	n.a.	50	n.a.	15,000	17,950	6.1	58,377	326,911	42,615	283,390	610,301	1,147,366
Burns	50,000	80,000	3,600	n.a.	150	n.a.	80,000	53,750	18.2	174,174	975,374	127,147	845,528	1,820,902	3,423,296
Vale	30,211	53,623	3,210	4,470	100	296	58,389	33,521	11.4	109,098	610,949	79,642	529,619	1,140,568	2,144,268
Lakeview	61,000	63,200	2,500	5,000	n.a.	n.a.	68,200	63,500	21.5	205,755	1,152,228	150,201	998,837	2,151,065	4,044,002
Medford	33,000	n.a.	0	0	150	n.a.	n.a.	33,150	11.2	107,184	600,230	78,244	520,323	1,120,553	2,106,640
Roseburg	23,000	n.a.	0	0	900	n.a.	n.a.	23,900	8.1	77,517	434,095	56,587	376,304	810,399	1,523,550
Coos Bay	15,000	n.a.	0	0	2,500	n.a.	n.a.	17,500	5.9	56,463	316,193	41,218	274,100	590,293	1,109,751
Eugene	10,000	n.a.	0	0	100		n.a.	10,100	3.4	32,538	182,213	23,753	157,957	340,170	639,520
Salem	24,000	n.a.	0	0	300		n.a.	24,300	8.2	78,474	439,454	57,286	380,952	820,406	1,542,363
TOTAL	279,211	234,273	10,260	9,470	5,750	n.a.	262,650	295,221	100.0	957,000**	5,359,199	698,610	4,645,758	10,004,957	18,809,319

*From district animal statistical reports 1970. **From 1970-71 BLM Facts. 1 - @ $5.60/day from Senate Doc. 97 updated by 25%. 2 - 73% of consumptive use.54/ 3 - @ $6.65/day.54/ 4 - Based on Economic multiplier of 1.88.42/ (based on average of Lodging sector and Cafe and Tavern sectors. If automotive were included the multiplier would be 1.5988.)

Table 64

Tradeoff Cost of Fisheries, Recreation and Environmental Protection on BLM Lands in Western Oregon 1970

	BLM Forest Acres Affected						BLM Timber Affected								Trade Off Costs		
	Stream Corridors			Recreation & Scenic			Stream Corridors				Recreation & Scenic Areas				Total	Total Value	
County	No.Timber Cutting Acres	% of Forest Acres	Limited Cutting Acres	No.Timber Cutting Acres	% of Forest Acres	Limited Cutting Acres	No. Cutting m.b.f.	Timber* Value	Limited Cutting m.b.f.	Timber* Value	No. Cutting m.b.f.	Timber* Value	Limited Cutting m.b.f.	Timber* Value	Stumpage Reduction m.b.f.	Stumpage Reduction	Economic** Impact on Community
SALEM DISTRICT																	
Coast Resource Area																	
Benton	0	0	164	683	1.4	294	0	$ 0	0	$ 0	464.0	$22,736.0	0	$ 0	464	$ 22,736	$ 33,877
Clatsop	4	0.4	0	5	0.5	42	3.9	191.1	0	0	5.1	249.9	9.0	441.0	18	882	1,314
Columbia	46	0.4	1	59	0.5	463	43.4	2,126.6	0.3	14.7	55.6	2,724.4	98.7	4,836.3	198	9,702	14,456
Lincoln	0	0	70	289	1.4	125	0	0	0	0	196.0	9,604.0	0	0	196	9,604	14,310
Polk	0	0	117	503	1.4	217	0	0	0	0	341.0	16,709.0	0	0	341	16,709	24,896
Tillamook	196	0.4	5	252	0.5	1,992	186.6	9,143.4	1.1	53.9	239.4	11,730.6	424.9	20,820.1	852	41,748	62,205
Washington	47	0.4	1	60	0.5	477	44.7	2,190.3	0.3	14.7	57.3	2,807.7	101.7	4,983.3	204	9,996	14,894
Yamhill	167	0.4	5	215	0.5	1,701	159.4	7,810.6	0.9	44.1	204.6	10,025.4	362.2	17,747.8	727	35,628	53,086
Subtotal	460	0.2	363	2,066	1.0	5,311	438.0	21,462.0	2.6	127.4	1,563.0	76,687.0	996.5	48,828.5	3,000	147,000	219,038
Cascade Resource Area																	
Clackamas	582	1.0	1,778	3,240	5.5	1,315	282	13,818	0	0	1,576	77,224	0	0	1,858	91,042	135,653
Linn	415	0.5	4,533	3,012	3.4	4,208	294	14,406	420	20,580	2,136	104,664	390	19,110	3,240	158,760	236,552
Marion	97	0.1	1,063	706	0.8	987	69	3,381	99	4,851	501	24,549	91	4,459	760	37,240	55,488
Multnomah	45	0.1	136	248	0.4	101	22	1,078	0	0	120	5,880	0	0	142	6,958	10,367
Subtotal	1,139	0.8	7,510	7,206	4.8	6,611	667	32,683	519	25,431	4,333	212,317	481	23,569	6,000	294,000	438,060
Dist. Total	1,599	0.4	7,873	9,272	2.6	11,922	1,105	54,145	522	25,558	5,896	288,855	1,478	72,442	9,000	441,000	657,090
EUGENE DISTRICT																	
Lane	600	0.2	8,032	2,096	0.7	46,688	446	21,854	735	36,015	1,554	76,146	4,265	208,985	7,000	343,000	511,070
ROSEBURG																	
Douglas	0	0	8,070	528	0.1	41,689	0	0	324	15,876	0	0	1,676	82,124	2,000	98,000	146,020
COOS BAY DISTRICT																	
Coos	3,920	1.4	0	6,089	2.2	4,010	1,176	57,624	0	0	5,000	245,000	1,824	89,376	8,000	392,000	584,080
Curry	431	3.0	0	540	3.8	159	0	0	0	0	0	0	0	0	0	0	0
Subtotal	4,351	1.5	0	6,629	2.3	4,169	1,176	57,624	0	0	5,000	245,000	1,824	89,376	8,000	392,000	584,080
MEDFORD DISTRICT																	
Jackson	0	0	2,408	1,855	0.7	11,473	0	0	1,038	50,862	1,000	49,000	4,962	243,138	7,000	343,000	511,070
Josephine	8,217	2.2	3,816	12,915	3.4	3,246	3,501	171,549	2,160	105,840	5,499	269,451	1,840	90,160	13,000	637,000	949,130
Klamath	0	0	1,406	1,590	2.2	3,370	0	0	588	28,812	1,000	49,000	1,412	69,188	3,000	147,000	219,030
Subtotal	8,217	1.2	7,630	16,360	2.3	18,089	3,501	171,549	3,786	185,514	7,499	367,451	8,214	402,386	23,000	1,127,000	1,679,230
W.Ore. TOTAL	14,767		31,605	34,885		122,557	6,228	305,172	5,367	262,963	19,949	977,452	17,457	855,313	49,000	2,401,000	3,577,490

*Stumpage value of $49 per m.b.f. as used in "An Allowable Cut Plan For Western Oregon, March 1970, BLM, p.75 (converted from International 1/8" rule

**Based on an input-output multiplier of 1.49.44/

Table 65

Cost of Fisheries and Recreation on BLM Forest Land in Western Oregon

	Economic Cost of Recreation & Scenic Areas			Economic Cost of Stream Protection			
County	Reduction Timber Harvest mbf	Value Reduced Timber Harvest	Community Economic* Impact	Reduction Timber Harvest mbf	Value Reduced Timber Harvest	Community Economic* Impact	Total Economic Impact
SALEM DISTRICT							
Coast Resource Area							
Columbia Unit							
Clatsop	14.1	$ 691	$ 1,030	3.9	$ 191	$ 285	$ 1,315
Columbia	154.3	7,561	11,266	43.7	2,141	3,190	14,456
Tillamook	664.3	32,551	48,500	187.7	9,197	13,704	62,204
Washington	159.0	7,791	11,609	45.0	2,205	3,285	14,894
Yamhill	566.8	27,773	41,382	160.3	7,855	11,704	53,086
Subtotal	1,558.5	76,367	113,787	440.6	21,589	32,168	145,955
Alsea-Rickreall Unit							
Benton	464.0	22,736	33,877	0	0	0	33,877
Lincoln	196.0	9,604	14,310	0	0	0	14,310
Polk	341.0	16,709	24,896	0	0	0	24,896
Subtotal	1,001.0	49,049	73,083	0	0	0	73,083
Cascade Resource Area							
Clackamas-Mollala Unit							
Clackamas	1,576.0	77,224	115,064	282.0	13,818	20,589	135,653
Multnomah	120.0	5,880	8,761	22.0	1,078	1,606	10,367
Subtotal	1,696.0	83,104	123,825	304.0	14,896	22,195	146,020
Santian Unit							
Linn	2,526.0	123,774	184,423	714	34,986	52,129	236,552
Marion	592.0	29,008	43,222	168	8,232	12,266	55,488
Subtotal	3,118.0	152,782	227,645	882	43,218	64,395	292,040
Dist. Total	7,374.0	361,297	538,333	1,627	79,703	118,757	657,090
EUGENE DISTRICT							
Lane	5,819.0	285,131	424,845	1,181	57,869	86,225	511,070
ROSEBURG DISTRICT							
Douglas	1,676.0	82,124	122,365	324	15,876	23,655	146,020
COOS BAY DISTRICT							
Coos	6,824.0	334,376	498,220	1,176	57,624	85,860	584,080
Curry	0	0	0	0	0	0	0
Subtotal	6,824.0	334,376	498,220	1,176	57,624	85,860	584,080
MEDFORD DISTRICT							
Josephine	7,339	359,611	535,820	5,661	277,389	413,310	949,130
Jackson	5,962	292,138	435,286	1,038	50,862	75,784	511,070
Klamath	2,412	118,188	176,100	588	28,812	42,930	219,030
Subtotal	15,713	769,937	1,147,206	7,287	357,063	532,024	1,679,230
TOTAL	37,406	1,832,865	2,730,969	11,595	568,135	846,521	3,577,490

*Based on an input-output multiplier of 1.49.44/45/

Table 66

Projected Increase in Sport Fishing for Resident Fish in Oregon[55] (User Days)

Sub-Region	BLM District or Area	1965 Use	1980 Demand	1980 Need	1980 % Increase	2000 Demand	2000 Need	2000 % Increase*
5	Vale District and SW Idaho	610,000	848,000	238,000	39.0	1,122,000	512,000	83.9
6	Baker district and Lower Snake R. Basin	686,000	953,000	267,000	38.9	1,269,000	583,000	85.0
7	Prineville District	1,047,000	1,456,000	409,000	39.0	1,927,000	880,000	84.0
9	Salem and Eugene Districts	994,000	1,381,000	387,000	38.9	1,828,000	834,000	83.9
10	Washington Coast and Coos Bay, Roseburg & Medford	1,200,000	1,668,000	468,000	39.0	2,208,000	1,008,000	84.0
12	Lakeview and Burns districts	129,000	179,000	50,000	38.8	237,000	108,000	83.7
TOTAL		4,666,000	6,485,000	1,819,000	39.0	8,591,000	3,925,000	84.1

*over 1965

Table 67

Projected Increase in Sport Fishing for Shellfish and Marine Fish in Subregion 10[55]

Type Use	1965 Use	1980 Demand	1980 Need	1980 % Increase	2000 Demand	2000 Need	2000 % Increase*
Shellfish	952,000	1,323,000	371,000	39.0	1,752,000	800,000	84.0
Marine Fish	633,000	879,000	246,000	38.9	1,164,000	531,000	83.9
TOTAL	1,585,000	2,202,000	617,000	39.0	2,916,000	1,331,000	84.0

*over 1965

Table 68

Projected Increased Hunting Demands in Oregon[55] Recreation Days

Sub-Region	BLM District or Area	1965 Use	1980 Demand	1980 Need	1980 % Increase	2000 Demand	2000 Need	2000 % Increase
5	Vale District & SW Idaho	1,087,000	1,313,000	226,000	20.8	1,702,000	615,000	56.6
6	Baker District & Lower Snake R. Basin	1,419,000	1,749,000	330,000	23.2	2,311,000	892,000	62.9
7	Prineville District	1,022,000	1,279,000	257,000	25.1	1,719,000	697,000	68.2
9	Salem and Eugene Districts	854,000	1,071,000	217,000	25.4	1,446,000	592,000	69.3
10	Washington Coast & Coos Bay, Roseburg & Medford Distrists	948,000	1,191,000	243,000	25.6	1,605,000	657,000	69.3
12	Lakeview and Burns Districts	158,000	198,000	40,000	25.3	268,000	110,000	69.6
TOTAL		5,488,000	6,801,000	1,313,000	23.9	9,051,000	3,563,000	64.9

136

Brian Wall
Lee Metcalf
Director

Recreation

E. Other Outdoor Recreation on BLM Lands

1. General

Oregon's outdoor attractions and recreational facilities provided about 84,067,200* visitor days enjoyment in 1970.61/ This equals about 40 visits per Oregon resident. From Table 69 we see that boating is the fastest growing outdoor sport of those listed. BLM provides boating facilities at Missouri Bend and Fishermen's Bend in the Salem District, on Whittaker Creek in the Eugene District, Loon Lake in Coos Bay District, Hyatt and Topsy Lakes in the Medford District, Mack's Canyon on Deschutes River in Prineville District, Gerber Reservoir in Lakeview District, Cow Lakes in Vale District, and Fish Lake and Chickahominy Reservoir in the Burns District. Table 69 also shows that sightseeing and driving for pleasure will continue to be the most populat form of outdoor recreation through 1980. State Highway Department surveys found that over 70% of all visits to recreation areas in Oregon included picnicking or camping.68/

State surveys show that an increase in park acreage of approximately 50% is needed to bring the supply up to recommended standards. Among recommended actions by the State Park report5/ were that Federal agencies: 1. Add 130 new recreation areas by 1985 at the rate of 8 per year with 30 new areas be developed as soon as possible to meet existing deficiencies; 2. Add 11,200 campsites to existing supply at rate of 700 per year with 2,500 added as soon as possible to meet existing deficiencies; 3. Add 2,400 picnic sites by 1985 at rate of 150 per year with 500 added as soon as possible to meet existing deficiencies. Outdoor recreation demand in 1970 was 11% above the capacity of existing facilities. Most of Oregon's recreation demand eminates from the Portland Metropolitan area. Impact area of Portland's weekend and day use recreation demand is depicted in Chart 7.

There were 2,101,000 recreation visits to BLM lands in Oregon in FY 1971.52/ Most prevalent use was sightseeing, 40.7%; followed by camping 25.3%; picnicking 15.7%; and water sports 6.3%. Construction of BLM logging roads in western Oregon is constantly opening new areas for recreational exploration and enjoyment in addition to their primary purpose for hauling logs. The 6,858 miles of BLM roads in Oregon offer many a challenge to people wishing to get into the "back country".52/

*Updated from 1967 data by use of the State Highway Department TIM formula for projecting demand.61/

Table 69

Outdoor Recreation Demand Trends in Oregon[56/]

Activity	Visitor Days Demand 1963[68/]	Visitor Days Demand 1970	Percent Increase 1963-1970	Activity Percentage of Total Use	Visitor Days Demand 1980	Percent Increase 1970-1980	Activity Percentage Total Use
Boating	2,092,064	4,119,293	197	4.9	5,931,782	144	5.6
Water Skiing	298,866	588,470	197	0.7	741,472	126	0.7
Swimming	2,348,235	4,623,696	197	5.5	5,825,857	126	5.5
Fishing**	6,997,500	8,784,662	125	10.4	12,181,337	138	11.5
Sightseeing	3,970,652	7,818,250	197	9.3	9,850,995	126	9.3
Picnicking	3,159,444	6,220,973	197	7.4	7,838,426	126	7.4
Camping	4,051,314	7,986,384	197	9.5	10,062,844	126	9.5
Other*	19,777,149	43,967,146	222	52.3	53,491,960	122	50.5
TOTAL	42,695,184	84,067,200	197	100.0	105,924,672	126	100.0

*Mostly non-water related such as driving for pleasure, photography, hiking, rockhounding,etc.
**Based on 7,500,000 recreation days fishing in 196t with an annual increase of 3.3%.[68/]

Table 70

Value of Outdoor Recreation and Tourism [56]

Sub Basin	BLM District	Tourist Expenditures	Non-Tourist Expenditures	Recreation Employment	Tourist Expenditures in Oregon	Non-Tourist Expenditures in Oregon	Proportionate Recreation Emplymt. Ore.
Central Snake, 2/5 in Oregon	Vale	$55,000,000	$27,000,000	9,000	$22,000,000	$10,800,000	3,600
Lower Snake, 15% in Oregon	Baker	45,000,000	22,000,000	7,500	2,250,000	1,100,000	1,125
Mid Columbia, 82% in Oregon	Prineville	44,000,000	22,000,000	7,300	36,080,000	18,040,000	5,986
Willamette Basin	Salem & Eugene	153,000,000	76,000,000	25,400	153,000,000	76,000,000	25,400
Coastal, 3/4 in Oregon	Roseburg, Coos Bay & Medford	152,000,000	76,000,000	25,000	114,000,000	57,000,000	18,750
Oregon Closed Basin	Lakeview and Burns	4,000,000	1,000,000	600	4,000,000	1,000,000	600
TOTAL		453,000,000	224,000,000	74,800	331,330,000	163,940,000	55,461

2. Economic Benefits From Outdoor Recreation Expenditures

a. General

The Columbia-North Pacific Study, Appendix XIII, Recreation, provides the most recent data on outdoor recreation expenditures in Oregon by area as shown in Table 70.

Tourist expenditures equaled 4.6% of Oregon's 1969 total personal income. The multiplier effect of this expenditure of "new" money would nearly double its inpact on the economy.

b. Economic Benefits From Recreational Use of BLM Resources

Lacking explicit user data as to the source and length of stay of recreationists on BLM lands it is difficult to determine economic benefits based on local expenditures made by the visitors to the area. As done in evaluating wildlife benefits, Senate Doc. 97 guidelines and benefits are used in this study due to lack of better data.[55] Table 71 shows the annual economic benefit from recreational use of BLM lands.

Another approach to evaluating the recreation resource in western Oregon is the trade-off benefits foregone in order to protect the recreation resource. Recently a reduction was made in BLM's sustained yield annual timber harvest due to removal from the forest inventory of those forest lands having important recreation or scenic values. This was done in response to public demand that this recreation resource be protected. The result was an economic value foregone of $2,730,969 per year due to removing this timber from the log market. It follows then that the public feels the recreational resource protected is worth at least this much. It should be understood that this timber acreage is in addition to that included in the 59 BLM developed recreation areas in western Oregon so the total recreation benefit would be much more than this. Value of the recreation trade off by district is Salem District $538,333; Eugene District $424,845; Roseburg District $122,365; Coos Bay District $498,220; and Medford District $1,147,206 as shown in Table 65.

3. Future Outdoor Recreation Demand

In 1970 there were an estimated 9,300,000 recreation days excess of outdoor recreation demand in Oregon over that which could be met by existing facilities.[56] This is expected to increase to 22,300,000 recreation days of unmet demand for facilities by 1980. Projected increases in outdoor recreation demand by area and activity are shown in Tables 72 to 77.[56]

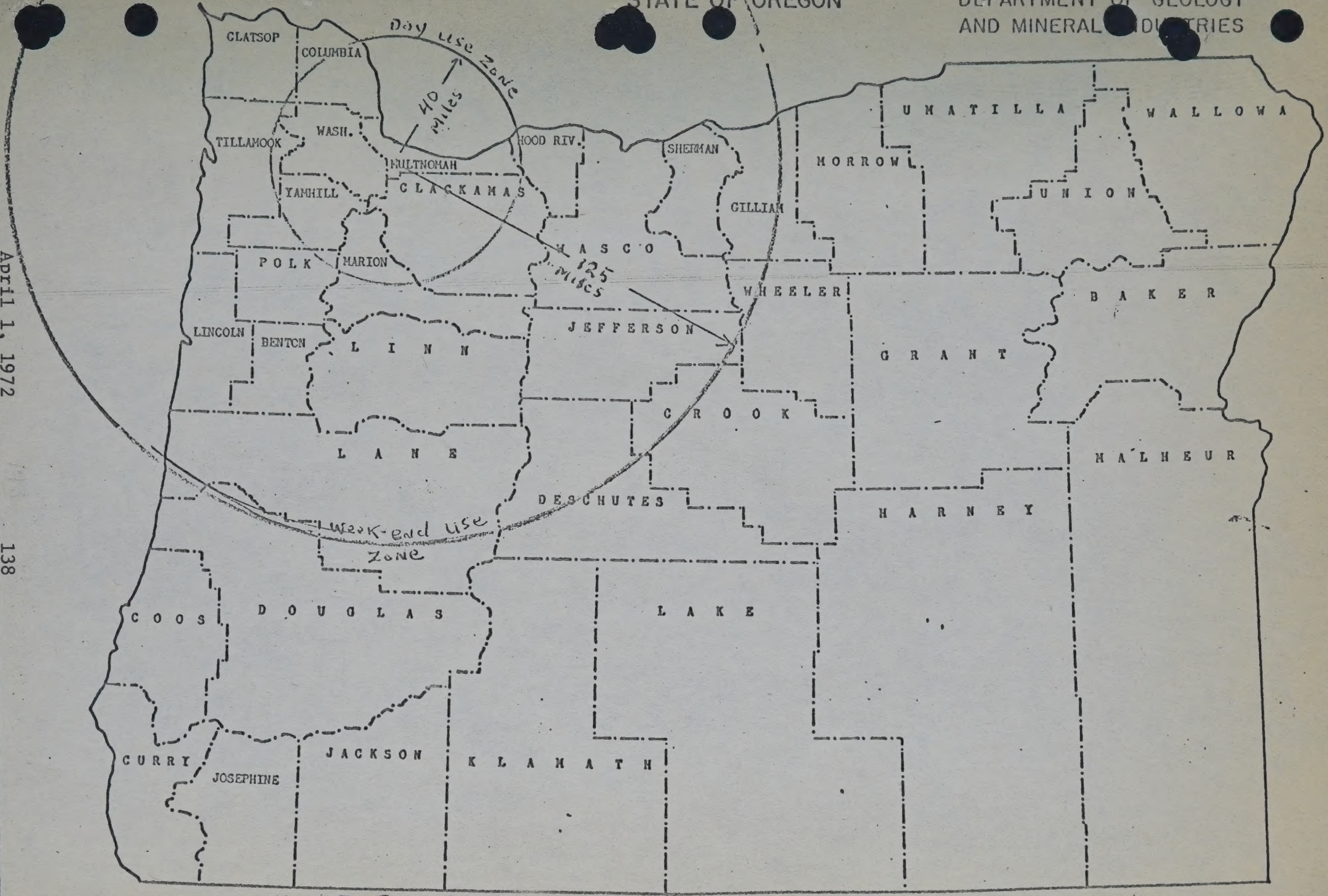

Day use Zone
40 Miles
125 Miles
Week-end use Zone
CLATSOP
COLUMBIA
TILLAMOOK
WASH.
MULTNOMAH
HOOD RIV.
SHERMAN
UMATILLA
WALLOWA
MORROW
UNION
YAMHILL
CLACKAMAS
GILLIAM
HASCO
POLK
MARION
WHEELER
BAKER
JEFFERSON
LINCOLN
BENTON
LINN
GRANT
CROOK
LANE
MALHEUR
DESCHUTES
HARNEY
COOS
DOUGLAS
LAKE
CURRY
JOSEPHINE
JACKSON
KLAMATH

Chart 7. Recreation Demand Zones - 40 miles day use zone, 125 miles overnight use

Table 71

Economic Benefit From Recreational Use of BLM Lands in Oregon [52]

Activity	Recreation Days	% of Total	Daily Economic Benefit	Direct Annual Economic Benefit	Community* Economic Benefit
Sightseeing	855,000	40.7	.70	$ 598,500	1,125,180
Camping	532,000	25.3	1.90	1,010,800	1,900,300
Picnicking	329,000	15.7	.70	230,300	432,960
Water Sports	133,000	6.3	1.40	186,200	350,060
Winter Sports	19,000	0.9	5.00	95,000	178,600
Other	233,000	11.1	1.50	349,500	657,060
TOTAL	2,101,000			2,470,300	4,644,160

*Using an economic multiplier of 1.88 (based on the average of the Lodging sector and Cafe and Tavern sectors in Grant County).

Table 72 shows that one of the greatest increases in identified recreation demand in Vale District by 1980 and 2000 will be boating. Greatest increased demand will be in nature enjoyment, photography and rockhounding.

As shown in Table 68 the great increase anticipated in demand for sightseeing in the Baker District and the Lower Snake River basin. The big surge in outdoor recreation demand in this area will be between 1980 and year 2000. There were 800,000 recreation days of unmet demand in 1970 and it is anticipated there will be 1,400,000 recreation days of unmet demand by 1980. This equals a 75% increase in unmet demand between 1970 and 1980.

Sightseeing, picnicking, and swimming are the most popular forms of outdoor recreation in the Prineville District as shwon in Table 74. Proximity to the heavily populated Willamette Basin has major impact on the recreation resource in this area. Greatest increase in demand by 1980 will be on the fishery resource. There was an unmet demand of 1,700,000 recreation days in 1970. This deficiency is expected to increase by 71% by 1980. This is due in part to excellent access via Interstate Hwy. 80N and U.S. Highways 97,20,26 and 126. The really big surge in recreation demand will hit this area between 1980 and year 2000.

Table 75 shows present and anticipated future recreation demand in the heavily populated Willamette Basin encompassing a major portion of the Eugene and Salem districts. It does not include the coastal area which receives its major use from Willamette Basin residents. However, BLM has very little ocean-front lands so Table 75 is a good reflection of the type and quantity of demand to be exerted on BLM's recreation resource. Boating is shown to be the fastest growing sport. Facilities were inadequate to satisfy 500,000 recreation days in 1970. By 1980 projections show a deficit of 6,100,000 recreation days, indicating a dire need for additional facilities.

There will be a major increase in boating demand in the Oregon and Washington Coastal area and the BLM Coos Bay, Roseburg, and Medford districts as shown in Table 76. Fishing is shown as the second area most increasing in interest. Lack of facilities precluded satisfaction of 4,900,000 recreation days demand in this area in 1970. Unsatisfied demand is expected to reach 7,600,000 recreation days by 1980.

Table 77 shows the recreation use and needs for the "Closed Basin" of Oregon encompassing the Lakeview and Burns BLM districts. This is one of the most undeveloped and inaccessible areas of Oregon. Sightseeing and hunting are the most popular activities in this area. Recreation use of the area has been light due to poor road access and lack of developed recreational facilities.

Table 72

Projected Increase in Outdoor Recreation Demand in Vale BLM District and Southwest Idaho[56]

1,000 Occasions

Activity	1970	1980 Demand	1980 Increase*	1980 % Increase	2000 Demand	2000 Increase*	2000 % Increase
Boating	900	1,400	500	156	2,900	2,000	322
Water skiing	360	480	120	133	930	570	258
Swimming	2,600	3,500	900	135	6,700	4,100	258
Fishing	689	848	159	123	1,122	433	163
Sightseeing	4,400	6,000	1,600	136	11,200	6,800	255
Picnicking	3,500	4,800	1,300	137	9,000	5,500	257
Camping	2,600	3,600	1,000	138	6,600	4,000	254
Other**	32,451	43,622	11,171	134	80,048	47,597	247
TOTAL	47,500	64,250	16750	135	118,500	71,000	249
Recreation Days	19,000	25.700	6,700	135	47,400	28,400	249
Residual Need-Recreation Days-(for facility development)	4,000	10,700	6,700	268	32,400	28,400	810

*over 1970
**Includes nature walks, rockhounding, photography, etc.

Table 73

Projected Increase in Outdoor Recreation Demand in Baker BLM District & Lower Snake River Basin [56/]

Activity	1970	1980 Demand	1980 Increase Over 1970	1980 Percent Increase	2000 Demand	2000 Increase Over 1970	2000 Percent Increase
	1,000 Occasions						
Boating	500	550	50	110	950	450	190
Water Skiing	201	232	31	115	418	217	208
Swimming	1,482	1,716	234	116	3,092	1,610	209
Fishing	780	953	173	122	1,269	489	163
Sightseeing	2,520	2,918	398	116	5,256	2,736	209
Picnicking	1,997	2,312	315	116	4,165	2,168	209
Camping	1,308	1,515	207	116	2,728	1,420	209
Other*	12,962	19,304	6342	149	36,372	23,410	281
TOTAL	21,750	29,500	7,750	136	54,250	32,500	249
Recreation Days	8,700	11,800	3,100	136	21,700	13,000	249
Residual Need for facility development	1,700	4,800	3,100	282	14,700	13,000	865

*Includes nature walks, rockhounding, photography, etc.

Table 74

Projected Increase in Outdoor Recreation Demand in Prineville BLM District Area 56/

	1,000 Occasions						
		1980			2000		
Activity	1970	1980 Demand	Increase Over 1970	Percent Increase	Demand	Increase Over 1970	Percent Increase
Boating	1,100	1,250	150	114	2,400	1,300	218
Water Skiing	362	418	56	115	816	454	225
Swimming	2,672	3,093	421	116	6,030	3,358	226
Fishing	1,182	1,456	274	123	1,927	745	163
Sightseeing	4,542	5,258	716	116	10,252	5,710	226
Picnicking	3,599	4,166	567	116	8,123	4,524	226
Camping	2,358	2,730	372	116	5,321	2,963	226
Other*	22,185	39,379	17,194	178	71,631	49,446	323
TOTAL	38,000	57,750	19,750	152	106,500	68 500	280
Recreation Days	15,200	23,100	7,900	152	42,600	27,400	280
Residual Need for facility development	3,500	11,400	7,900	326	30,900	27,400	883

*Includes nature walks, rockhounding, photography, etc.

Table 75

Projected Increase in Outdoor Recreation Demand in BLM Salem and Eugene Districts 56/

	1,000 Occasions						
		1980			2000		
Activity	1970	1980 Demand	Increase Over 1970	Percent Increase	Demand	Increase Over 1970	Percent Increase
Boating	7,100	11,000	3,900	155	22,000	14,900	310
Water Skiing	432	656	224	152	1,276	844	295
Swimming	3,192	4,848	1,656	152	9,430	6,238	295
Fishing	1,125	1,381	256	123	1,828	703	162
Sightseeing	5,427	8,242	2,815	152	16,031	10,604	295
Picnicking	4,300	6,531	2,231	152	12,703	8,403	295
Camping	2,817	4,278	1,461	152	8,321	5,504	295
Other*	60,361	77,564	17,203	129	142,411	82,050	236
TOTAL	84,750	114,500	29,750	135	214,000	129,250	253
Recreation Days	33,900	45,800	11,900	135	85,600	51,700	253
Residual Need for facility development	1,500	13,400	11,900	893	53,200	51,700	3546

*Includes nature walks, rockhounding, photography, etc.

Table 76

Projected Increase in Outdoor Recreation Demand in BLM Coos Bay, Roseburg, Medford Districts and Oregon and Washington State Coastal Area 56/

	1,000 Occasions						
		1980			2000		
Activity	1970	1980 Demand	Increase Over 1970	Percent Increase	Demand	Increase Over 1970	Percent Increase
Boating	5,564	8,848	3,284	159	19,034	13,470	342
Water Skiing	1,073	1,136	63	106	2,165	1,092	202
Swimming	7,930	8,395	465	106	16,004	8,074	202
Fishing	2,990	3,870	88	129	5,124	2,134	171
Sightseeing	13,480	14,271	791	106	27,207	13,727	202
Picnicking	10,682	11,308	626	106	21,559	10,877	202
Camping	6,997	7,408	411	106	14,121	7,124	202
Other*	78,034	116,764	38,730	150	211,286	133,252	271
TOTAL	126,500	172,000	45,500	136	316,500	190,000	250
Recreation Days	50,600	68,800	18,200	136	126,600	76,000	250
Residual Need for facility development	11,400	29,600	18,200	260	87,400	76,000	767

*Includes nature walks, rockhounding, photography, etc.

Table 77

Projected Increase in Outdoor Recreation Demand in BLM Burns and Lakeview Districts 56/

	1,000 Occasions						
		1980			2000		
Activity	1970	1980 Demand	Increase Over 1970	Percent Increase	Demand	Increase Over 1970	Percent Increase
Boating	50	100	50	200	200	150	400
Water Skiing	18	33	15	183	70	52	389
Swimming	137	242	105	177	521	384	380
Fishing	146	179	33	123	237	91	162
Sightseeing	232	411	179	177	885	653	381
Picnicking	184	325	141	177	701	517	381
Camping	121	212	91	175	460	339	380
Other*	3362	3998	636	119	6426	3064	191
TOTAL	4,250	5,500	1250	129	9,500	5250	224
Recreation Days	1,700	2,200	500	129	3,800	2100	224
Residual Need for facility development	500	1,000	500	200	2,600	2100	520

*Includes nature walks, rockhounding, photography, etc.

Sightseeing is the activity projected to grow the most in the Closed Basin, followed by picnicking and swimming. Facilities were not available to meet 100,000 recreation days of demand in 1970. This deficit is projected to increase fourfold by 1980. Boating demand is the fastest growing activity.

F. Water Resources

1. General

Studies made by the Oregon State Water Resources Board find that there are more than an adequate supply of water in western Oregon to meet our needs for the next 100 years.[64] This is not the case in eastern Oregon where now many streams are entirely used up for irrigation during the drier years. Major use of water in eastern Oregon is for irrigation. Not enough water originates in eastern Oregon watersheds to meet potential irrigation demands. In western Oregon water problems are more related to water quality, inadequate distribution of supplies, and excessive winter flows and deficient summer flows. Streams originating in the Coast Range portion of the Willamette Basin are also severely depleted by summer drawdown for irrigation. BLM is responsible for management of 26% of the total land area (watershed) of Oregon. The use and management of these public lands has substantial impact on the quality, amount, and timing of the water runoff. Computations from mean annual runoff charts shows 10,041,000 acre feet average runoff from the BLM managed lands in Oregon, as shown in Table 78.

Table 78

Average Water Runoff From BLM Lands in Oregon by District

Burns	712,824
Baker	98,458
Lakeview	500,458
Prineville	264,017
Vale	541,392
Medford	2,158,000
Coos Bay	1,422,583
Roseburg	965,333
Eugene	1,035,500
Salem	2,342,333
TOTAL	10,041,000

About 86% of the runoff in the Willamette Basin comes from the forested watershed, including the BLM managed lands.[65] Water runoff from BLM lands in the basin averages 59 inches per acre compared to 21 inches per acre in the non-forested valley. Due to differences in soil and elevation the Cascades are a more important watershed than the Coast

Range. "A forested watershed on the Cascade slopes in good condition releases water at an average annual rate of 4-6 cubic feet per second per square mile."65/

The value of water is dependent on the type of use--industrial, domestic, agriculture, recreation, fisheries, transportation, etc. It has a higher value in the Willamette Valley than elsewhere in Oregon due to the heavy industrial and municipal uses. Irrigation is the least valuable use in an economy of abundant food supplies as now exists.

In western Oregon water quality and yields from BLM lands are affected by timber management practices and by road construction. BLM's program for wildfire prevention and control is an important factor in protection of the water resource. Water quality and yields can be improved from BLM range lands by ground cover manipulation, water spreading, water control, structures and livestock management practices. BLM's many reservoirs and spring developments are important to wildlife in the area as well as to the livestock. Consumptive water use on BLM lands is relatively small as compared to the total runoff from the lands.

2. Central Snake Area - Vale District

Subregion 5 of the Columbia-North Pacific study-Irrigation appendix shows 4 subareas in Oregon. These are Burnt River, Powder River, Malheur, and the west half of the Owyhee Basin subarea. Irrigation agriculture is the most important single element in the economy of this subregion. In 1966 there were 438,000 irrigated acres in the Oregon portion of the Subregion. Of this 173,000 acres were receiving an inadequate water supply. The main source of irrigation water was from surface waters. Irrigation is of major importance to the livestock industry since the greatest acreage is in hay and the next greatest in irrigated pasture. Additional irrigation water needs by subarea are shown in Table 79.

3. Baker District

There are 101,600 acres of land under irrigation in the Baker District, 54,500 acres of which have an inadequate water supply. Hay and pasture are the major irrigated crops, supplementing the livestock industry. A total of 255,000 acre feet of water is diverted from stream flow and taken from groundwater to service this land. There are also 421,800 acres of potentially irrigable lands in the district which will require an additional 970,140 acre feet of water.

The Grande Ronde River discharges an average of less than 1.5 million acre feet annually and appears inadequate to irrigate all potentially irrigated lands. The Imnaha River drainage contains few potentially irrigable lands.

Table 79

Additional Irrigation Water Needs in the Vale District

	1966 Irrigated Land-Acres				Year 2000 Water Requirements-Acre Feet			
Sub Area	Adequate Water	Inadequate Water	New Land Potential	Total Irrigable Acres	Adequately Watered Land acre feet	Inadequately Watered Land acre feet	New Lands acre feet	Total Water Needs acre feet
Owyhee(½)	61,230	21,200	1,000,000	1,082,430	170,594	120,000	3,000,000	3,340,594
Malheur	153,400	36,600	565,000	755,000	506,220	49,000	1,921,000	2,476,220
Burnt R.	4,670	10,900	331,000	496,570	13,076	11,000	926,800	1,164,986
Powder R.	45,700	104,300			105,110	109,000		
TOTAL	265,000	173,000	1,896,000	2,334,000	795,000	289,000	5,847,800	6,981,800

4. Prineville District

There are 459,500 acres of land under irrigation in the Prineville district plus Morrow and Umatilla Counties. Of this 216,600 acres have an inadequate supply of water. Here as in other parts of eastern Oregon the major irrigated crops are hay and pasture in support of livestock operations. Livestock production from irrigated land is estimated to be 32% of total production. This amounts to 48 million pounds of beef per year. Table 80 shows the irrigation situation in north central Oregon. "The irrigation potential of this area is virtually untapped."[63]

Public water-related recreation demands in the Prineville District by people from the Willamette Basin makes water quality a top management priority in this district. The Deschutes, Crooked River, John Day River, Prineville and Ochoco reservoirs are a few of the areas most in demand for recreational use and most dependent on proper watershed management to protect water quality.

5. Salem and Eugene Districts

The main hydrologic feature of this sub basin is the Willamette River to which BLM lands make a substantial contribution in water run off. Water problems are mainly related to quality in view of the population concentrations along the river as well as the use of the river for recreation. Another water quality factor is the relatively large amount used for urban and industrial consumption. Nuclear power plants being built fairly close to population centers will also require large amounts of water for cooling. Although there is a relatively large acreage of agricultural land suitable for irrigation, ample supplies of water are available.[64] The relatively large number of water storage reservoirs as well as the many lakes in the Cascades provide an abundance of water oriented outdoor recreation.

6. Oregon Coastal Area (Coos Bay, Roseburg and Medford Districts)

For the most part this area extends inland from the ocean only to the crest of the Coast Range. However in southern Oregon it includes the entire Umpqua and Rogue River drainages. Precipitation is high except for a dry three month period in summer. Acreage of agricultural land is minimal except in the upper valleys of the Umpqua and Rogue Rivers. Irrigation is vital to the agricultural economy of the Rogue Basin as evidenced by 118,000 irrigated acres. In the Oregon Coastal Area there are 46,500 acres irrigated lands with an inadequate supply of water. Most of this was in the Rogue River Basin. There are an additional 804,400 acres of potentially irrigable lands in the Oregon Coastal Area. There is adequate surface water supplies to meet long range irrigation needs to year 2020. The 1966 irrigation water use of 451,000 acre feet will increase to 780,000 acre feet by year 2020.

Table 80

Irrigation Water Needs in North Central Oregon

	1966 Irrigated Land-Acres				Year 2000 Water Requirements-Acre Feet			
Sub Area	Adequate Water	Inadequate Water	New Land Potential	Total Irrigable Acres	Adequately Watered Land acre feet	Inadequately Watered Land acre feet	New Lands acre feet	Total Water Needs acre feet
Walla Walla	10,000	15,900	78,000	103,900	60,000	39,000	288,600	387,600
Umatilla	37,000	27,600	1,386,300	1,450,900	235,000	69,000	5,545,200	5,849,200
John Day	17,100	53,900	1,032,600	1,103,600	76,000	206,000	3,923,880	4,205,880
Deschutes	143,100	113,700	1,482,500	1,739,300	805,000	444,000	4,744,000	5,993,000
Hood	35,700	5,500	201,100	242,300	129,000	16,000	723,960	868,960
TOTAL	242,900	216,800	4,180,500	4,640,000	1,305,000	774,000	15,225,640	17,304,640

7. Oregon Closed Basin (Burns and Lakeview Districts)

There are 327,000 acres under irrigation in this area, mostly from surface waters. The irrigated farms here are large and rely on livestock to provide the major source of income. Hay and pasture are the principal irrigated crops. Expansion of irrigated acreage would no doubt increase the number of livestock on the ranches. Water use totals 636,000 acre feet. About 90% of the lands lack sufficient water supplies, reflecting a 330,000 acre feet shortage. Irrigated acreage is expected to increase by 3,000 acres by 1980 and by an additional 10,000 acres by year 2000. Water demand will increase to 730,000 acre feet by 1980 and to 930,000 acre feet by year 2000.

G. Mineral Resources on BLM Lands

Public interest in conventional minerals on BLM lands is now largely limited to sand, gravel, rock, pumice, and cinders. For the most part these are relatively small operations and have little impact on the economy. Availability of these resources does make possible relatively inexpensive road and building construction in local areas.

Of much greater economic importance is the potential development of the geothermal steam resource on BLM lands. Known reserves are mostly in eastern Oregon, particularly in the Lakeview and Vale Districts. Only one geothermal steam application on BLM lands has been filed. Since legislation permitting this type of use on public lands is recent, many more applications are anticipated. Development of the geothermal steam resource will require major construction activity and should have an impressive economic impact on the economy of the local area.

Perhaps of more immediate interest is the revived interest in oil drilling in Oregon. Texaco has just finished drilling a well near Prineville. Now Standard Oil is seeking permission to drill on BLM lands. A total of 206 oil and gas leases have been issued covering 384,757 acres of BLM lands. Another 70 applications to lease are pending, embracing 142,000 acres. Economic impact of an oil discovery would be dependent on the estimated reserves in the field. Whether a refinery would be built in the area depends both on the amount of anticipated oil reserves and the availability of an abundance of water needed for cooling purposes in the processing of chemicals. If the crude oil is pumped out of the state for processing, there would be little economic benefit from an oil discovery.

However, even the drilling of an oil well pumps some money into the local economy. About 23 people were employed at the Texaco well for round the clock drilling. Since this is a specialized type of operation, wages are high to compensate for the limited stay at any one location, with resultant high costs for domiciling. Pay for the Texaco drillers averaged $1,260 per month, including travel and cost of living expense.

Payroll for the 2 month operation was about $63,000. In view of their dependence on motels and restaurants while in the area each oil worker supported another worker in service type industry. Wages in service industries in Crook County averaged about $3,500 per year.[32] On this basis the oil workers supported an additional payroll of $14,600 in Crook County for a total payroll impact of $77,600.

BIBLIOGRAPHY

1. "Oregon Blue Book 1968-68", State of Oregon 1967.
2. "Oregon Blue Book 1970-71", State of Oregon 1970.
3. "Oregon Timber Industries 1968 - Wood Consumption and Mill Characteristics", Pac. N.W. For. & Range Exp. Station and State of Oregon Dept. of Forestry, 1971.
4. "Oregon Economic Statistics 1971" Bur. Business and Econ Research, University of Oregon.
5. "1970 Out of State Tourist Revenue Study", Ore. State Hwy. Div., Dec. 1970.
6. "Columbia - N. Pacific Framework Study - Economic Base", Pac. Northwest River Basins Commission, Jan. 1971.
7. "Oregon Employment & Payrolls 1969", State of Oregon Employment Div., 1970.
8. "1970 Directory Forest Products Industry," Miller Freman Pub.
9. "Oregon Business Review", Vol. XXX, Jan. 1971, No. 1
10. "Oregon Covered Employment and Payrolls by Industry & County", 3rd qtr. 1970, State of Oregon Employment Div., Research & Statistics Section.
11. "Production, Prices, Employment & Trade in Northwest Forest Industries - First Quarter 1971", Pac. NW For. & Range Exp. Station, USDA 1971.
12. "Production, Prices, Employment & Trade in Northwest Forest Industries - Fourth Quarter 1970", Pac. NW For. & Range Exp. Station, USDA 1970.
13. "Value & Employment Associated with Pacific NW Log Exports to Japan" Pac. NW For. & Range Exp. Station, PNW 27, 1965.
14. "Resources for Development", Oregon Dept. of Planning and Development, 1964.
15. "Willamette Basin Comprehensive Study - Appendix A, Study Area", 1969, Pac. NW River Basins Commission.
16. "Timber Resource Statistics for Pacific Northwest", Pac. NW For. & Range Exp. Station, PNW 9, 1965.

Appendix

17. "Douglas Fir Supply Study", Pac. NW For. & Range Exp. Station, USDA, 1969.

18. "USDA Forest Service Resource Bul. PNW 29, 1969, Pac. NW For. & Range Exp. Station.

19. "Projected Developments of the Timber Economy of the Columbia - North Pacific Region", Pac. NW Forest & Range Exp. Station, PWN 84, 1969.

20. "Timber Trends in the United States", U.S. Forest Service, Forest Resource Report 17, 1965.

21. "Utilization of Douglas Fir Bark", J.A. Hall, 1971, Pac. NW For. & Range Exp. Station.

22. "A Directory of Bark Producers and Facilities in Benton, Lane and Linn Counties", E. D. Couickshank, Ore. State Forestry Dept., March 1968.

23. "Labor Force Trends", Oregon State Employment Service, August 1970.

24. "The Demand and Price Situation for Forest Products 1970-71", U.S. Forest Service, Misc., Pub. No. 1195.

25. "Oregon Forest Product Industry Reports", Oregon Dept. Commerce, 1966.

26. "Japan Lumber Journal, Vol. 7, No. 6, March 25, 1966.

27. Unpublished BLM timber appraisal data of 3-8-71.

28. "Man Power Use in the Wood Products Industries Oregon and Washington", Pac. NW For. & Range Exp. Station, PNW 28, 1965.

29. "Oregon Covered Employment and Payrolls 1968", State of Oregon Employment Div.", September 1969.

30. "Oregon Economic Statistics 1970", Bur. Business & Econ. Research, University of Oregon.

31. "Estimation of Regional Secondary Benefits Resulting from Improvement in Water Quality of Upper Klamath Lake, Oregon", thesis, S.D. Reiling, OSU.

32. "Oregon Covered Employment & Payrolls 1970", State of Oregon Employment Div., September 1971.

33. "Estimation of the Magnitude & Distribution of Benefits from Recreational Resource Management in Economy of a Small Area", undated study by H. H. Stoevener and A. A. Sokoloski, OSU.

34. "Effects of Selected Changes in Federal Land Use on a Rural Economy", OSU Sta. Bul. 604, 1968.

35. "Area Trends in Employment and Unemployment", U.S. Dept. of Labor, August 1971.

36. Rough Draft "Economic Profile for BLM in Oregon", BLM State Office, October 16, 1969.

37. "1970 Annual Report", Oregon State Game Commission.

38. "Labor Force and Employment in Oregon", State of Oregon Employment Div. Research and Stat.

39. Moody's Handbook of Common Stocks 1971 ed., Moody's Investor Service, Inc.

40. "A Model for the Determination of Wildland Resource Values", Forest Service, USDA, 1971.

41. "The Role of Forest Lands in the Washington Economy", 1970, Business-Economics Advisory and Research, Inc.

42. "Effects of Selected Changes in Federal Land Use on a Rural Economy", OSU Sta. Bul. 604, 1968.

43. "The Estimation of Regional Secondary Benefits Resulting from an Improvement in Water Quality of Upper Klamath Lake, Oregon: An Inter Industry Approach", thesis, Stephen D. Reiling, OSU.

44. "Estimation of the Magnitude & Distribution of Benefits from Recreational Resource Management in the Economy of a Small Area", H. H. Stoevener & A. A. Sokolski, OSU.

45. "Impact of a Major Economic Change on a Coastal Rural Economy", 1968, Ted Collins, Russ Youmans, & Herb Stoevener.

46. "Oregon Economic & Trade Structure", Don Watson & Rbt. Allen, Bur. Bus. & Econ. Research, U. of O., 1969.

47. Unpublished Input-Output Study Made by Graduate School of Business, U.of Washington, 1967.

48. "The Washington Economy: An Input-Output Study", Graduate School Bus. Admin., U. ov Wash., for year 1963.

49. "Survey of Current Business", August 1971.

50. "Characteristics of the Pacific Northwest Beef Industry", Special Report 256, 1968, OSU & Econ. Research Service.

51. "A look Ahead for Food & Agriculture", R. F. Daly & A. C. Egbert, Econ. Research Service, USDA, 1963.

52. "BLM Facts - Oregon & Washington 1970-71", Oregon State Office, BLM, 1971.

53. "Report to Western Assn. of State Game & Fish Commissioners on Non Resident Hunting & Angling, Wildlife Management Institute, 1971.

54. "Economic Evaluation of Game Ranges", 1967, Washington State Game Dept.

55. Appendix 14, Fish & Wildlife, Columbia North Pacific Comprehensive Framework Study, 1971.

56. Appendix 13, Recreation, Columbia - North Pacific Comprehensive Framework Study, June 1971.

57. Community Profiles Oregon Counties "Office Economic Opportunity".

58. "Federal Land in Oregon", W.B.

59. "Summary Report - Oregon Comprehensive Statewide Planning Study", Oregon Dept. Planning & Development, March 1964.

60. "Evaluation Standards for Primary Outdoor Recreation Benefits", Suppl. No. 1, Senate Doc. 97, 6-4-64.

61. "Oregon Outdoor Recreation", 3rd Ed. Suppl. 1969, Oregon State Hwy. Division.

62. "The Economic Importance of Timber in the United States", USFS, Misc. Pub. 941, Dwight Hair, 1963.

63. Appendix IX, Irrigation, Col.-N. Pacific Comprehensive Study, 1971.

64. "Oregon's Long Range Requirements for Water", Summary Report, State Water Resources Board, 1969.

65. Appendix G "Land Measures & Watershed Protection", Willamette Basin Comprehensive Study, 1970.

66. United States Census of Agriculture, 1964, Bur. of Census.

67. United States Census of Agriculture, 1969, Bur. of Census.

68. "Oregon Outdoor Recreation", Third Ed., State Hwy. Dept., 1967.

69. "An Economic Assessment of BLM's Allowable Cut Plan for Western Oregon", Sloan, State of Oregon Executive Dept., 1971.

Board

Appendix A

Employment, Unemployment and Poverty Indices

For

Oregon Counties

Table 81

Oregon Employment By County and Industry 1969[7]

	Basic Industries						Service Industries								
County	Agriculture Forestry Fisheries	Mining	Food Mfg.	Lumber & Wood Products	All Other Mfg.	Basic Industry Employmt Total	Contract Construction	Transport. Communication & Utilities	Wholesale & Retail Trade	Finance Insurance Real Estate	Services	Government	Service Industry Employmt	Total Employmt	Ratio Basic/ Service Industry
SALEM DISTRICT															
Coast Resource Area															
Benton	74	14	284	1,622	620	2,614	479	608	2,595	330	1,418	3,345	8,775	11,389	1 to 3.4
Clatsop	13	18	1,307	1,019	853	3,210	336	523	1,801	214	1,039	518	4,431	7,641	1 to 1.4
Columbia	20	36	52	1,163	1,219	2,490	261	179	869	126	249	133	1,817	4,307	1 to 0.7
Lincoln	n.a.	51	176	1,038	674	1,989	224	398	1,452	252	949	435	3,710	5,699	1 to 1.9
Polk	44	n.a.	732	1,620	973	3,369	329	87	1,167	266	403	327	2,579	5,948	1 to 0.8
Tillamook	24	24	202	1,384	67	1,701	81	138	731	92	332	296	1,670	3,371	1 to 1.0
Washington	191	118	1,850	792	13,900	16,851	2,495	1,075	7,459	955	2,771	528	15,283	32,134	1 to 0.9
Yamhill	25	63	649	828	1,469	3,034	254	323	1,952	386	967	223	4,105	7,139	1 to 1.4
Subtotal	391	324	5,252	9,516	19,775	35,258	4,459	3,331	18,026	2,621	8,128	5,805	42,370	77,628	1 to 1.2
Cascade Resource Area															
Clackamas	180	94	384	2,243	6,485	9,386	2,180	844	7,794	837	3,108	1,452	16,215	25,601	1 to 1.7
Linn	176	104	1,009	5,454	3,112	10,665	1,242	885	3,357	511	1,238	650	7,073	17,738	1 to 0.7
Marion	152	76	3,680	961	2,897	7,766	2,474	1,569	9,889	2,379	4,012	10,243	30,566	38,332	1 to 3.9
Multnomah	441	110	7,478	4,751	42,484	55,264	13,275	22,072	72,206	19,860	34,118	16,623	178,154	233,418	1 to 3.2
Subtotal	949	384	12.551	13,409	54,978	83,081	19,171	25,730	93,246	23,587	42,476	28,968	232,008	315,089	1 to 2.8
Dist. Total	1,340	708	17,803	22,925	74,753	118,339	23,630	28,701	111,272	26,208	50,604	34,773	274,378	392,717	1 to 2.3
EUGENE DISTRICT															
Lane Co.	217	259	1,591	14,468	3,302	19,837	3,075	2,434	13,649	2,045	6,158	3,482	30,843	50,680	1 to 1.6
ROSEBURG DISTRICT															
Douglas Co.	114	212	294	7,701	1,218	9,539	703	843	3,418	399	1,467	1,567	8,397	17,936	1 to 0.9
COOS BAY DISTRICT															
Coos	85	32	673	5,678	499	6,967	465	1,484	2,789	491	1,334	534	7,097	14,064	1 to 1.0
Curry	8	n.a.	130	1,480	22	1,640	120	111	520	81	227	161	1,220	2,860	1 to 0.7
Subtotal	93	32	803	7,158	521	8,607	585	1,595	3,309	572	1,561	695	8,317	16,924	1 to 1.0
MEDFORD DISTRICT															
Jackson	171	41	426	4,805	1,016	6,459	802	1,425	6,392	721	2,473	1,450	13,263	19,722	1 to 2.1
Josephine	21	38	85	1,836	638	2,618	253	369	1,825	206	922	435	4,010	6,628	1 to 1.5
Klamath	117	0	157	3,295	255	3,824	471	697	3,155	397	1,504	1,269	7,493	11,317	1 to 2.0
Subtotal	309	79	668	9,936	1,909	12,901	1,526	2,491	11,372	1,324	4,899	3,154	24,766	37,667	1 to 2.0

Table 81 (Cont.)

Oregon Employment By County and Industry 1969[7]

	Basic Industries						Service Industries								
County	Agriculture Forestry Fisheries	Mining	Food Mfg.	Lumber & Wood Products	All Other Mfg.	Basic Industry Employmt Total	Contract Construction	Transport. Communication & Utilities	Wholesale & Retail Trade	Finance Insurance Real Estate	Services	Government	Service Industry Employmt	Total Employmt	Ratio Basic/ Service Industry
W.Ore. Total	2,073	1,290	21,159	62,188	81,703	169,223	29,519	36,064	143,020	30,548	64,689	43,671	346,201	515,424	1 to 2.0
Oregon	2,461	1,454	24,436	70,951	85,241	184,543	32,259	39,472	158,093	32,412	70,120	52,688	385,087	569,630	1 to 2.1
BAKER DISTRICT															
Baker	33	57	24	545	160	819	140	226	981	126	279	370	2,118	2,933	1 to 2.6
Morrow	0	0	n.a.	127	n.a.	127	3	50	201	35	53	62	423	550	1 to 3.3
Umatilla	74	6	916	503	1,581	3,080	421	578	2,911	331	910	2,365	7,515	10,595	1 to 2.4
Union	39	0	28	1,131	136	1,334	99	218	1,123	115	429	529	2,512	3,846	1 to 1.9
Wallowa	n.a.	n.a.	0	212	n.a.	212	42	54	286	40	111	151	709	921	1 to 3.3
Subtotal	146	63	968	2,518	1,877	5,572	705	1,126	5,502	647	1,778	3,477	13,277	18,845	1 to 2.4
PRINEVILLE DISTRICT															
Crook	4	8	n.a.	1,277	30	1,319	41	77	490	56	186	263	1,118	2,437	1 to 0.8
Deschutes	33	34	114	1,707	667	2,555	476	501	2,069	401	851	639	4,944	7,499	1 to 1.9
Gilliam	7	0	0	0	n.a.	7	7	19	131	13	38	64	272	279	--------
Jefferson	27	9	n.a.	349	60	445	77	99	565	60	272	140	1,251	1,696	1 to 2.8
Sherman	0	n.a.	0	0	n.a.	0	312	15	127	n.a.	n.a.	25	479	513	--------
Wasco	17	n.a.	211	337	556	1,121	222	213	1,304	132	627	658	3,156	4,278	1 to 2.8
Wheeler	0	0	0	264	0	264	n.a.	14	26	n.a.	n.a.	34	74	350	1 to 0.3
Subtotal	88	51	325	3,934	1,313	5,711	1,135	938	4,712	662	1,974	1,823	11,294	17,052	1 to 2.0
BURNS DISTRICT															
Grant	n.a.	n.a.	17	724	27	768	73	123	328	40	91	313	968	1,746	1 to 1.3
Harney	0	0	0	641	n.a.	641	61	91	399	64	184	262	1,061	1,708	1 to 1.7
Subtotal	0	0	17	1,365	27	1,409	134	214	727	104	275	575	2,029	3,454	1 to 1.4
VALE DISTRICT															
Malheur	81	n.a.	1,463	47	96	1,687	191	262	1,730	155	445	349	3,134	4,821	1 to 1.9
LAKEVIEW DISTRICT															
Lake	7	4	4	407	36	458	25	96	330	58	135	327	971	1,430	1 to 2.0
E.Ore. Total	315	118	2,777	8,271	3,349	14,830	2,190	2,636	13,001	1,626	4,607	6,551	30,705	45,602	1 to 2.1

Table 82

Oregon Payrolls By County 1969 1/

County	Agriculture Forestry Fisheries	Mining	Contract Construction	Mfg.	Wood Products Mfg.	Wood Prod. % Total Mfg.	Transport. Communications Utilities	Wholesale & Retail Trade	Finance Insurance Real Estate	Services	Government	Total	Wood Prod. % Total
SALEM DISTRICT													
Coast Resource Area													
Benton	$272,559	n.a.	$3,635,057	$19,031,875	$12,753,787	67.0	$3,836,110	$11,175,217	$1,800,855	$7,034,103	$17,410,406	$64,295,454	19.8
Clatsop	83,296	n.a.	3,114,655	24,118,907	8,777,724	36.4	4,120,679	8,228,057	1,131,449	3,488,965	3,232,424	47,688,712	18.4
Columbia	132,260	n.a.	2,248,879	20,737,247	9,506,063	45.8	1,623,252	3,698,362	726,590	801,993	928,552	31,200,323	30.5
Lincoln	n.a.	377,852	1,727,756	14,040,752	8,263,845	58.9	2,797,629	5,906,372	1,320,352	3,088,537	3,565,897	32,839,506	25.2
Polk	n.a.	n.a.	2,470,611	24,328,141	12,775,580	52.5	520,510	5,176,701	1,027,035	1,268,511	1,663,662	36,729,197	34.8
Tillamook	49,150	137,316	544,554	11,871,595	10,385,762	87.5	892,189	3,218,488	436,403	1,112,441	2,304,797	20,567,474	50.5
Washington	850,634	1,032,487	20,028,199	119,221,841	5,669,629	4.8	8,123,225	41,733,801	5,810,570	11,750,670	3,897,930	212,452,478	2.7
Yamhill	107,539	468,010	1,967,832	21,427,195	6,402,896	29.9	2,367,771	8,150,410	2,154,377	3,434,788	1,595,703	41,681,717	15.4
Subtotal	1,495,438	2,015,665	35,737,543	254,777,553	74,535,286	29.3	24,281,365	87,287,408	14,407,631	31,980,008	34,599,371	487,454,861	15.3
Cascade Resource Area													
Clackamas	778,888	803,974	18,798,256	70,084,135	17,096,863	24.4	6,469,923	45,729,512	4,541,372	13,152,321	10,898,232	171,290,200	10.0
Linn	857,380	719,194	11,361,139	74,316,451	41,416,905	55.7	6,864,835	16,155,405	2,728,711	4,246,483	5,601,074	122,852,138	33.7
Marion	672,729	652,134	20,327,745	48,862,355	7,187,657	14.7	12,194,639	49,168,917	14,618,247	17,010,446	77,115,989	240,639,161	3.0
Multnomah	2,344,804	986,088	129,568,281	445,928,904	39,820,507	8.9	197,078,533	466,631,306	136,868,060	177,936,730	139,553,824	1,696,928,191	2.3
Subtotal	4,663,801	3,161,390	180,055,421	639,191,845	105,521,932	16.5	222,607,930	577,685,140	158,756,390	212,345,980	233,169,119	2,231,709,690	4.7
Dist. Tot.	6,149,239	5,177,055	215,792,964	893,969,398	180,057,218	20.1	246,889,295	664,972,548	173,164,021	244,325,988	267,768,490	2,719,164,551	6.6
EUGENE DISTRICT													
Lane	788,624	2,402,429	26,731,970	149,960,096	112,930,087	75.3	18,395,060	69,835,050	11,162,927	26,090,069	22,829,049	328,208,542	34.4
ROSEBURG DISTRICT													
Douglas	406,695	1,864,934	6,364,425	74,590,484	62,974,814	84.4	6,218,995	15,563,179	2,216,765	5,771,673	12,375,224	125,372,376	50.2
COOS BAY DISTRICT													
Coos	365,200	208,777	3,907,971	52,584,599	46,354,651	88.2	12,242,404	15,399,661	2,604,674	5,621,085	4,323,767	97,273,238	47.7
Curry	0	n.a.	869,777	12,203,556	11,808,554	96.8	680,497	2,093,170	427,729	663,946	1,129,704	18,105,086	65.2
Subtotal	365,200	208,777	4,777,748	64,788,155	58,163,205	89.8	12,922,901	17,492,831	3,032,401	6,285,031	5,453,471	115,378,324	50.4
MEDFORD DISTRICT													
Jackson	912,261	299,753	7,273,571	49,638,389	38,659,321	77.9	11,806,124	31,918,997	4,087,677	15,726,762	10,694,924	132,358,460	29.2
Josephine	115,443	334,303	1,784,559	18,830,500	14,454,583	76.8	2,765,209	8,308,449	1,272,905	3,288,613	3,259,232	39,959,695	36.2
Klamath	491,816	0	3,833,938	29,188,026	26,174,974	89.7	5,091,095	15,206,708	2,010,475	5,700,545	9,046,697	70,592,828	37.1
Subtotal	1,519,520	634,056	12,892,068	97,656,915	79,288,878	81.2	19,662,428	55,434,154	7,371,057	24,715,920	23,000,853	242,910,983	32.6
W.Ore. Tot.	9,229,278	10,287,251	266,559,175	1,280,965,048	493,414,202	38.5	304,088,679	823,297,762	196,947,173	307,188,681	331,427,087	3,531,034,776	14.0

Table (Cont.)

Oregon Payrolls by County 1969 1/

County	Agriculture Forestry Fisheries	Mining	Contract Construction	Mfg.	Wood Products Mfg.	Wood Prod. % Total Mfg.	Transport. Communications Utilities	Wholesale & Retail Trade	Finance Insurance Real Estate	Services	Government	Total	Wood Prod. % Total
State Tot.	10,577,146	12,105,153	291,130,947	1,388,973,728	560,689,631	40.4	330,882,187	898,622,860	207,290,169	325,029,787	399,704,596	3,864,527,828	14.5
BAKER DISTRICT													
Baker	97,966	469,534	1,341,458	5,784,043	4,314,747	74.6	1,659,555	3,863,884	714,707	877,441	2,907,648	17,716,236	24.4
Morrow	0	0	8,674	1,055,864	951,225	90.1	379,170	892,072	190,681	154,877	433,625	3,114,961	30.5
Umatilla	117,068	35,554	3,701,790	18,898,953	3,358,544	17.8	3,982,420	14,208,567	1,895,522	2,947,316	17,679,942	63,467,935	5.3
Union	81,008	0	692,794	10,504,717	9,599,985	91.4	1,566,809	5,004,495	589,451	1,204,411	3,576,697	23,220,384	41.3
Wallowa	n.a.	n.a.	240.161	1,802,279	1,748,816	97.0	419,138	1,219,689	180,270	265,207	1,062,775	5,236,285	33.4
Subtotal	296,042	505,088	5,984,877	38,045,836	19,973,317	52.5	8,007,092	25,188,707	3,570,631	5,449,252	25,660,687	112,755,801	17.7
PRINEVILLE DISTRICT													
Crook	27,532	39,436	235,145	9,589,332	9,405,471	98.1	620,532	2,297,131	278,737	571,957	2,093,929	15,753,732	59.7
Deschutes	147,610	294,721	4,212,438	16,631,096	12,440,194	74.8	3,977,262	9,731,568	427,729	2,865,954	5,162,199	45,268,798	27.5
Gilliam	0	0	50,981	n.a.	0	0	72,282	522,673	57,818	92,509	448,756	1,257,415	0
Jefferson	84,968	55,156	744,379	3,081,467	2,582,529	83.8	813,295	2,755,347	282,901	1,049,771	902,016	9,769,300	26.4
Sherman	0	n.a.	3,751,510	n.a.	0	0	74,222	530,656	n.a.	n.a.	157,563	4,622,171	0
Wasco	41,897	n.a.	1,950,942	8,547,621	2,787,915	32.6	1,574,444	6,134,444	823,676	2,345,663	5,351,647	26,780,085	10.4
Wheeler	0	0	n.a.	2,035,066	2,035,066	100.0	73,039	111,102	n.a.	n.a.	219,771	2,487,428	81.8
Subtotal	302,007	389,313	10,945,395	39,884,582	29,251,175	73.3	7,205,076	22,082,921	1,870,861	6,925,854	14,335,881	105,938,929	27.6
BURNS DISTRICT													
Grant	n.a.	n.a.	466,958	5,699,290	5,476,704	96.1	844,660	1,260,304	216,567	239,804	2,335,979	11,120,642	49.2
Harney	0	0	400.916	5,153,282	5,118,206	99.3	619,975	1,608,312	300,259	484,622	2,101,495	10,668,861	48.0
Subtotal			867,874	10,852,572	10,594,910	97.6	1,464,635	2,868,616	516,826	724,426	4,437,474	21,789,503	48.6
VALE DISTRICT													
Malheur	234,255	n.a.	1,653,808	7,809,065	225,575	2.9	2,158,274	7,941,259	843,990	1,347,951	2,817,260	24,822,254	0.9
LAKEVIEW DISTRICT													
Lake	21,376	28,775	170,379	3,357,929	3,132,524	93.3	628,920	1,403,233	265,497	408,499	2,560,966	8,845,570	35.4
E.Ore. Total	853,680	923,176	19,622,333	99,950,004	63,177,501	63.2	19,463,997	59,484,736	7,067,805	14,855,982	49,812,268	274,152,057	23.0

Table 83

Personal Income Trends for Oregon Counties

County	1960*	1965	% Increase	1968	% Change from 1960	1970**	% Change from 1960
Baker District							
Baker	37,420,000	33,920,000	- 9.4	43,530,000	16.3	54,504,000	45.7
Morrow	15,909,000	11,810,000	-21.7	12,260,000	-18.8	15,775,890	4.5
Umatilla	103,060,000	112,310,000	10.9	138,030,000	33.9	163,205,250	58.4
Union	35,120,000	43,560,000	12.4	54,390,000	54.9	71,669,520	104.1
Wallowa	13,850,000	12,440,000	-10.2	15,940,000	15.1	22,359,675	64.7
Subtotal	204,540,000	214,040,000	10.5	264,150,000	29.1	327,514,335	60.1
Prineville District							
Crook	21,320,000	24,050,000	11.7	30,360,000	42.4	36,464,610	71.0
Deschutes	45,650,000	67,200,000	14.7	84,680,000	85.5	109,575,375	140.0
Gilliam	11,010,000	12,030,000	10.9	7,300,000	-33.7	8,184,345	-25.7
Jefferson	15,650,000	21,090,000	13.5	24,890,000	59.0	31,903,755	103.9
Sherman	9,410,000	18,520,000	96.8	10,150,000	7.9	11,875,500	26.2
Wasco	45,270,000	52,280,000	15.5	59,100,000	30.6	71,939,985	58.9
Wheeler	5,300,000	4,840,000	- 8.7	5,290,000	- 0.2	6,528,210	23.2
Subtotal	153,610,000	200,010,000	30.2	221,770,000	44.4	276,471,780	80.0
Vale District							
Malheur	49,290,000	53,950,000	9.5	64,150,000	30.1	85,259,460	73.0
Burns District							
Grant	16,460,000	17,890,000	8.7	22,820,000	38.6	25,608,960	55.6
Harney	15,280,000	19,580,000	28.1	23,510,000	53.9	26,146,185	71.1
Subtotal	31,740,000	37,470,000	18.1	46,330,000	46.0	51,755,145	63.1
Lakeview District							
Lake	18,200,000	17,810,000	- 2.1	20,770,000	14.1	23,145,135	27.2
Klamath	112,200,000	120,350,000	7.3	146,100,000	30.2	179,559,120	60.0
Subtotal	130,400,000	138,160,000	6.0	166,870,000	28.0	202,704,255	55.4
E. Ore. Total	569,580,000	643,630,000	13.0	763,270,000	34.0	943,704,975	65.7
State TOTAL	4,089,000,000	5,350,000,000	30.8	6,660,000,000	62.9	7,777,000,000	90.2

Eastern Oregon total personal income equals 12.1% of the state total.

*Oregon Personal Income by Counties 1950-1961, Columbian Research Institute, 1962.
**Broken out on county population basis from State of Oregon total.

Table 83 (cont.)

Personal Income Trends for Oregon Counties

County	1960*	1965	% Increase	1968	% Change from 1960	1970**	% Change from 1960
Salem District							
Coast Resource Area							
Benton	65,070,000	114,980,000	76.7	147,120,000	126.9	197,361,645	203.3
Clatsop	59,010,000	72,800,000	23.4	89,120,000	51.0	103,250,940	75.0
Columbia	33,420,000	46,460,000	39.0	61,490,000	84.0	105,585,090	215.9
Lincoln	43,290,000	56,650,000	30.9	69,330,000	60.2	92,358,240	113.3
Polk	44,060,000	54,680,000	24.1	68,630,000	55.8	129,552,735	194.0
Tillamook	35,300,000	37,120,000	5.2	48,120,000	36.3	63,466,650	79.8
Washington	185,690,000	237,070,000	27.7	341,920,000	84.1	570,336,585	207.1
Yamhill	51,660,000	68,670,000	32.9	91,220,000	76.6	146,710,590	184.0
Subtotal	517,500,000	688,430,000	33.0	916,950,000	77.2	1,408,622,475	172.9
Cascade Resource Area							
Clackamas	230,850,000	256,020,000	10.9	335,740,000	45.4	608,672,220	163.7
Linn	110,900,000	158,920,000	43.3	194,880,000	75.7	257,286,315	132.0
Marion	239,310,000	350,800,000	46.6	434,660,000	81.6	546,865,410	128.5
Multnomah	1,458,270,000	2,073,020,000	42.2	2,633,730,000	80.6	n.a.	-----
Subtotal	2,039,330,000	2,838,760,000	39.2	3,599,010,000	76.5	1,412,823,945	-----
Total	2,556,830,000	3,527,190,000	38.0	4,515,960,000	76.6	n.a.	-----
Eugene District							
Lane	326,950,000	507,080,000	55.1	592,810,000	81.3	787,846,020	141.0
Roseburg District							
Douglas	127,430,000	180,720,000	41.8	207,180,000	62.6	262,358,460	105.9
Coos Bay District							
Coos	111,490,000	136,880,000	22.8	168,520,000	51.2	205,242,180	84.1
Curry	26,600,000	32,610,000	22.6	34,960,000	31.4	47,183,175	77.4
Subtotal	138,090,000	169,490,000	22.7	203,480,000	47.4	252,425,355	82.8
Medford District							
Jackson	141,440,000	213,300,000	50.8	252,260,000	78.4	344,527,950	143.6
Josephine	52,580,000	73,810,000	40.4	84,620,000	60.9	132,186,990	151.4
Subtotal	194,020,000	287,110,000	48.0	336,880,000	73.6	476,714,940	145.7
West Ore Total	3,343,320,000	4,671,590,000	39.7	5,856,310,000	75.2	6,833,295,025	104.4

Western Oregon total equals 87.9% of the state total.

Table 84

Unemployment Situation In Oregon Counties[38] *

County	1960			1969			1970		
	Labor Force	Number Unemployed	Percent Unemployed	Labor Force	Number Unemployed	Percent Unemployed	Labor Force	Number Unemployed	Percent Unemployed
SALEM DISTRICT									
Coast Resource Area									
Benton	14,316	453	3.2	23,060	890	3.9	23,640	1,160	4.9
Clatsop	10,149	589	5.8	12,130	660	5.4	12,360	770	6.2
Columbia	7,741	370	4.8	8,530	460	5.4	8,830	640	7.2
Lincoln	8,773	423	4.8	9,140	570	6.2	9,400	740	7.9
Polk	9,902	729	7.4	13,738	714	5.2	14,630	1,024	7.0
Tillamook	6,709	219	3.3	6,210	380	6.1	6,270	480	7.7
Washington	34,815	1,491	4.3	73,344	2,567	3.5	74,560	4,623	6.2
Yamhill	12,120	857	7.1	14,030	900	6.4	14,890	1,440	9.7
Subtotal	104,525	5,131	4.9	160,182	7,141	4.5	164,580	10,877	6.6
Cascade Resource Area									
Clackamas	43,232	2,105	4.9	78,386	2,744	3.5	79,686	4,941	6.2
Linn	20,673	1,545	7.5	29,220	1,480	5.1	29,500	2,160	7.3
Marion	43,822	3,242	7.4	60,262	3,134	5.2	61,570	4,310	7.0
Multnomah	214,208	11,221	5.2	261,746	9,161	3.5	266,086	16,497	6.2
Subtotal	321,935	18,113	5.6	429,614	16,518	3.0	436,842	27,908	6.4
Dist. Total	426,460	23,244	5.5	589,796	23,659	4.0	601,422	38,785	6.4
EUGENE DISTRICT									
Lane	61,219	3,714	6.1	87,650	4,800	5.5	90,800	6,400	7.0
ROSEBURG DISTRICT									
Douglas	24,259	1,800	7.4	28,540	1,820	6.4	28,860	2,290	7.9
COOS BAY DISTRICT									
Coos	20,310	1,199	5.9	22,420	1,650	7.4	22,870	1,870	8.2
Curry	5,605	406	7.2	4,850	360	7.4	4,800	390	8.1
Subtotal	25,915	1,605	6.1	27,270	2,010	7.4	27,670	2,260	8.2
MEDFORD DISTRICT									
Jackson	27,182	1,882	6.9	38,510	2,680	7.0	38,510	2,680	7.0
Josehpine	10,689	1,096	10.3	13,890	1,480	10.7	15,200	1,390	9.1
Klamath	18,298	1,307	7.1	20,220	960	4.7	20,440	1,280	6.3
Subtotal	56,169	4,285	7.6	72,620	5,120	7.1	74,150	5,350	7.2
W.Ore. Total	594,022	34,648	5.8	805,876	37,409	4.6	822,902	55,085	6.7

Table 84 (Cont.)

Unemployment Situation In Oregon Counties[38/]*

County	1960 Labor Force	1960 Number Unemployed	1960 Percent Unemployed	1969 Labor Force	1969 Number Unemployed	1969 Percent Unemployed	1970 Labor Force	1970 Number Unemployed	1970 Percent Unemployed
BAKER DISTRICT									
Baker	6,796	415	6.1	5,720	310	5.4	5,870	420	7.2
Morrow	1,928	88	4.6	1,750	100	5.7	1,770	120	6.8
Umatilla	16,682	1,028	6.2	19,140	1,320	6.9	18,700	1,220	6.5
Union	6,837	583	8.5	7,770	380	4.9	8,360	570	6.8
Wallowa	2,602	194	7.5	2,360	160	6.8	2,420	180	7.4
Subtotal	34,845	2,308	6.6	36,740	2,270	6.2	37,120	2,510	6.8
PRINEVILLE DISTRICT									
Crook	3,772	389	10.3	4,500	300	6.7	4,640	400	8.6
Deschutes	9,725	866	8.9	12,340	660	5.3	13,040	950	7.3
Gilliam	1,203	33	2.7	930	50	5.4	930	50	5.4
Jefferson	2,684	120	4.5	4,070	210	5.2	3,970	320	8.1
Sherman	890	39	4.4	1,030	73	7.1	9,610	750	7.8
Wasco	8,002	573	7.2	8,600	607	7.1			7.8
Wheeler	1,041	86	8.3	830	50	6.0	800	60	7.5
Subtotal	27,317	2,106	7.7	32,300	1,950	6.0	32,990	2,530	7.7
BURNS DISTRICT									
Grant	2,995	369	12.3	3,110	140	4.5	3,110	241	7.7
Harney	2,745	136	5.0	3,190	120	3.8	3,250	170	5.2
Subtotal	5,740	505	8.8	6,300	260	4.1	6,360	411	6.5
VALE DISTRICT									
Malheur	9,038	405	4.5	7,533**	452	6.0	7,671**	460	6.0
LAKEVIEW DISTRICT									
Lake	3,045	275	9.0	2,990	190	6.4	3,010	250	8.3
E.Oregon Total	79,985	5,599	7.0	85,863	5,152	6.0	87,151	6,191	7.1

* Covered employment

**Based on 1 worker per 3 people as compared to State average of 1 per 3.77 of covered employment.

Table 85

Poverty Indices For Oregon Counties 1966 57/

Area and County	Total Families	Poverty Level Income	Families In Poverty	% In Poverty		No. in Poverty Increase Over 1960	Effective Buying Income 1969	Housing Conditions 1960		Median Value of Housing	Average Population Per Unit	Agricultural Prosperity Index
				1960	1966			Total Units Housing	% Unsound Housing			
Nat'l Norm			1,221		15.1				26%	$11,900	3.3	100
Oregon	604,000		83,000		18.1		$9,042					
SALEM DISTRICT												
Coast Resource Area												
Benton	12,691	$2,431	1,608	11.1	12.7	56.1%	$10,328	11,715	21%	$12,900	3.0	121
Clatsop	8,251	2,509	1,411	15.3	17.1	22.4	7,758	12,392	25.5	7,900	3.0	108
Columbia	6,849	2,624	1,339	18.1	19.6	26.8	7,247	8,007	28.7	6,900	3.0	108
Lincoln	7,493	2,490	1,463	19.1	19.5	12.7	7,449	10,380	26.8	8,200	3.0	109
Polk	8,789	2,401	1,508	16.6	17.2	29.2	7,758	9,526	33.9	8,200	3.0	117
Tillamook	5,066	2,323	652	13.7	12.9	-1.7	8,000	7,830	33.9	7,400	3.0	120
Washington	34,875	2,508	3,947	10.8	11.3	51.3	10,887	29,996	18.5	12,600	3.0	114
Yamhill	9,848	2.467	2,014	20.6	20.5	14.8	7,527	11,497	18.3	7,400	3.0	113
Subtotal	93,862	2,469	13,942		14.9		8,369			8,938		
Cascade Resource Area												
Clackamas	39,498	2,484	5,018	12.2	12.7	36.9	9,945	40,032	23.4	11,600	3.0	108
Linn	18,901	2,546	2,985	15.1	15.8	28.3	7,913	19,489	23.4	9,000	3.0	121
Marion	40,292	2,516	6,743	16.2	16.7	43.3	8,874	40,296	23.6	10,300	3.0	114
Multnomah	192,473	2,491	21,865	10.7	11.4	49.3	9,455	189,548	17.2	11,000	3.0	118
Subtotal	291,164	2,509	36,611		12.6		9,047			10,475		115
Dist. Total	385,026	2,489	50,553		13.1		8,708					115
EUGENE DISTRICT												
Lane County	57,102	2,578	7,328	11.4	12.8	53.3	9,488	52,042	20.7	10,800	3.0	116
ROSEBURG DISTRICT												
Douglas Co.	20,828	2,686	3,375	13.7	16.2	39.8	8,361	22,238	27.5	9,000	3.0	110
COOS BAY DISTRICT												
Coos	17,020	2,544	2,181	11.5	12.8	31.3	8,357	18,489	30.1	9,400	3.0	109
Curry	4,553	2,744	664	11.3	14.6	57.7	8,720	4,675	26.1	10,800	3.0	n.a.
Subtotal	21,573		2,845		13.2		8,538			10,100		109
MEDFORD DISTRICT												
Jackson	27,450	2,457	4,089	14.7	14.9	40.5	8,248	26,102	26.2	10,600	3.0	115
Josephine	10,687	2,464	1,938	18.3	18.1	30.0	7,687	11,059	23.7	9,500	3.0	107
Klamath	14,913	2,615	2,078	11.2	13.9	48.0	8,508	16,942	27.5	9,900	3.0	133
Subtotal	53,050		8,105		15.3		8,148			10,000		118

Table 85 (Cont.)

Poverty Indices For Oregon Counties 1966 57/

Area and County	Total Families	Poverty Level Income	Families In Poverty	% In Poverty 1960	% In Poverty 1966	No. In Poverty Increase Over 1960	Effective Buying Income 1969	Housing Conditions 1960 Total Units Housing	Housing Conditions 1960 % Unsound Housing	Median Value of Housing	Average Population Per Unit	Agricultural Prosperity Index
BAKER DISTRICT												
Baker	4,780	2,450	835	14.8%	17.5%	23.3%	7,155	6,435	30.6	$7,400	3.0	123
Morrow	1,501	2,641	237	14.2	17.1	22.1	8,784	1,778	32.8	9,200	3.0	n.a.
Umatilla	13,145	2,696	2,261	14.6	17.2	38.6	8,809	15,782	25.9	10,200	3.0	136
Union	5,330	2,475	918	16.2	17.2	21.3	7,367	6,490	35.5	8,100	3.0	114
Wallowa	1,924	2,375	349	14.3	18.1	29.3	7,002	2,842	31.5	8,300	3.0	106
Subtotal	26,680		4,620		17.3		7,823			8,640		119
PRINEVILLE DISTRICT												
Crook	2,606	2,453	351	13.1	13.5	5.7	8,138	3,233	34.3	8,600	3.0	129
Deschutes	7,913	2,370	1,000	12.6	12.6	27.7	7,714	8,472	26.6	9,300	3.0	112
Gilliam	1,015	2,496	155	10.2	15.3	101.3	9,489	1,186	54.8	10,000	3.0	171
Jefferson	2,868	2,594	438	12.6	15.3	91.3	8,213	2,464	23.5	8,900	4.0	129
Sherman	1,094	2,450	131	7.6	12.0	62.3	10,667	885	27.3	8,300	3.0	n.a.
Wasco	6,840	2,540	981	12.2	14.3	50.2	8,833	7,372	35.5	11,200	3.0	132
Wheeler	602	2,606	92	11.1	15.3	12.2	7,530	987	34.2	8,300	4.0	n.a.
Subtotal	22,938		3,148		13.7		8,655			9,229		134
BURNS DISTRICT												
Grant	2,259	2,545	347	12.9	15.4	31.4	8,233	2,910	35.9	7,100	3.0	120
Harney	2,022	2,503	328	13.8	16.2	42.0	7,603	2,343	35.1	9,400	3.0	n.a.
Subtotal	4,281		675		15.8		7,918			8,250		120
VALE DISTRICT												
Malheur Co.	6,254	2,502	1,498	21.6	24.0	21.2	6,836	8,053	32.1	9,900	3.0	127
LAKEVIEW DISTRICT												
Lake County	2,210	2,367	210	9.2	9.5	21.4	8,243	2,890	44.5	9,100	3.0	n.a.

Appendix B

Overview of Oregon Wood Products Industry

By

Major Timber Companies

APPENDIX

Overview of Oregon Wood Products Industries

Buyers of BLM timber vary from the industrial giants with the thousands of stockholders like Georgia-Pacific to the small one owner mills completely dependent on the open market for stumpage. Examining the assets of these big companies makes one wonder how the small miles with limited capital can stay in business. The following thumbnail sketch of the operations of several of the big wood product companies gives not only an idea of their assets but also shows the impact on earnings from the ups and downs in the lumber markets.[39]

Boise Cascade Corp., 2121 S.W. Broadway, Portland, Oregon

Sales income in 1970 consisted of timber and building material 19%, paper and packaging 28%, housing 14%, engineering and construction 22%, recreation 9%, utilities and investments 8%. It merged with Ebasco Industries in 1969. It controls 6.4 million acres of timberland. Sales declined 1.3% in 1970. Net income fell 55%. Its recreation business proved unprofitable. In the first half of 1971 sales declined 3% to $827,900,000 from comparable 1970 period.

Boise Cascade Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	% Operating Profit Margin	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1963	218.1	7,390	6.6	36.1	0.87	0.19	1.3
1968	1,025.6	45,390	9.3	82.0	2.40	0.24	0.4
1969	1,533.1	84,010	6.9	160.6	2.79	0.24	0.4
1970	1,716.9	36,560	2.8	233.7	1.19	0.25	0.4

Crown Zellerbach Corp., 1500 S.W. First, Portland, Oregon

As the second largest paper producer in the nation, it produced 2.3 million tons of pulp and paper in 1970. It controls 3.2 million acres timberland. 1970 sales rose 3.9% over those in 1969 due to expanded productive capacity. Wood products accounted for 14% of its sales. Profit margins were reduced by lower building material prices, depressed markets, rising costs, and excess plants capacity. Net income fell 22.3%. Capital spending for 1971 is projected at the $68 million in 1970. First quarter 1971 sales increased 2.8% to $231 million.

Crown Zellerbach Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	% Operating Profit Margin	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1961	562.6	36,679	12.7	153.2	1.55	1.09	3.0
1967	788.8	49,358	9.7	160.9	2.11	1.47	4.6
1968	865.5	59,492	10.7	171.8	2.55	1.47	4.2
1969	919.3	53,963	9.2	166.4	2.29	1.53	3.8
1970	955.3	41,905	7.8	211.3	1.77	1.60	5.4

Evans Products Co., 1121 S.W. Salmon, Portland, Oregon

This is an integrated production-marketing operation. It has 40 wholesale distribution centers and over 140 building material retail stores. It is also in prefabricated home construction. Breakdown of 1970 sales income shows: retail stores 23%, industrial production 18%, forest products 17%, prefinishing 21%, international trade 7%, fiber products 2%, homes 12%. Sales in 1970 advanced slightly from 1969. All operating groups except forest products had higher sales. Lower prices adversely affected building

material profits and net earnings fell 30.6%. First quarter 1971 sales rose 9.5% to $125.6 million and earnings increased 76% over first quarter 1970 returns due to improved building material and housing markets. Expansion plans for 1971 include 20 new retail stores, a hardboard plant in Virginia and a particleboard plant in North Carolina.

Evans Products Company Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	$ Operating Profit Margin	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1961	98.3	2,983	-	20.0	1.01	-	-
1967	281.4	7,779	5.0	47.5	4.79	0.51	1.9
1968	341.7	8,875	6.5	47.3	5.25	0.53	1.5
1969	527.1	14,713	7.1	78.2	5.73	0.55	1.2
1970	553.2	11,390	5.7	97.9	3.42	0.57	1.8

Georgia Pacific Corp., 900 S.W. Fifth, Portland, Oregon

This is one of the world's largest integrated forest products producers. It is the world's largest producer of plywood. It controls 6 million acres of forest land. Sales income fiscal year 1970 was plywood 35%, gypsum products 6%, pulp and paper 32%, chemical products 12%, lumber and lumber specialities 15%. Sales in 1970 advanced 3.4% over those in 1969, reflecting additional plant capacity and volume and higher pulp sales. Lower prices for building material and higher costs including interest charges narrowed profit margins and net income fell 13.7%. In first quarter 1971 sales rose 8.9% to $312.5 million and net income was up 1.1% from 1970 levels. Spending for plants and equipment in 1971 is estimated at $125 million vs. $202 million in 1970. The Federal Trade Commission is challenging in the courts Georgia Pacific's right to purchase 16 Southern pine and plywood firms.

Georgia Pacific Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	$ Operating Profit Margin	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1961	238.3	13,838	11.2	57.1	0.45	0.22	1.6
1967	812.7	56,550	13.3	214.8	1.15	0.43	1.9
1968	1,023.9	76,620	14.1	234.9	1.54	0.45	1.2
1969	1,160.2	91,760	14.1	260.7	1.83	0.60	1.4
1970	1,199.4	79,220	12.3	223.7	1.55	0.76	1.6

International Paper Co., Longview, Washington

This is the world's largest paper company. Output of pulp and paper was 7 million tons in 1970, 70% in the United States and 30% in Canada. With control of 23 million acres timberlands, it has the largest holdings in the industry. Over 20% of its 1970 output was sold abroad. In 1968 it moved into the land development field. It entered the home construction field in 1969. 1970 sales advanced 3.6% over 1969. The first half 1971 sales increased 5.5% to $954.4 million while net income fell 32% due to the cost-price squeeze. Capital spending is expected to be about $100 million in 1971 vs. $203 million in 1970.

International Paper Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1961	1,044.8	72,002	219.4	1.64	1.00	3.1
1968	1,561.8	98,870	312.8	2.28	1.39	4.2
1970	1,840.8	82,477	330.1	1.85	1.50	4.4

Weyerhaeuser Company, Tacoma, Washington

This is the largest producer of lumber in the United States. In 1970 pulp and paper accounted for 20% of its sales, paperboard and cartons 25%, lumber 23%, plywood, veneer and doors 12%, logs, chips and timber 18%, particleboard 3%. About 22% of its sales were to foreign markets. It owns 5.6 million acres timberland and has 9.5 million acres harvest rights in Canada and Southeast Asia. Its real estate sales totalled $61 million in 1970. Product sales in 1970 advanced 2.9% over 1969, reflecting increased foreign trade and greater plant capacity. Rising costs and depressed prices narrowed profit margins and net return fell 5.4%. Expenditures for 1971 may be close to 1970's $282 million. Plans call for outlays of over $1 billion by 1974 with more than 50% for new paperboard and pulping plants and $200 million for new building material capacity.

Weyerhaeuser Growth Trends

Year	Gross Revenue $ Millions	Net Income $ Thousands	Working Capital $ Millions	Earnings Per Share Dollars	Dividends Per Share Dollars	% Average Yield
1961	491.6	36,638	112.4	0.61	0.60	3.3
1967	886.6	60,293	157.2	1.01	0.70	3.5
1968	1,032.8	105,022	167.8	1.76	0.70	2.3
1969	1,239.2	131,362	144.6	2.11	0.78	2.0
1970	1,233.4	124,207	152.3	1.87	0.80	1.7

Appendix C

Oregon Forest Products

Industry Statistical Tables and Charts

Figure 5.--Distribution of Saw Log Consumption by Ownership Origin, 1968

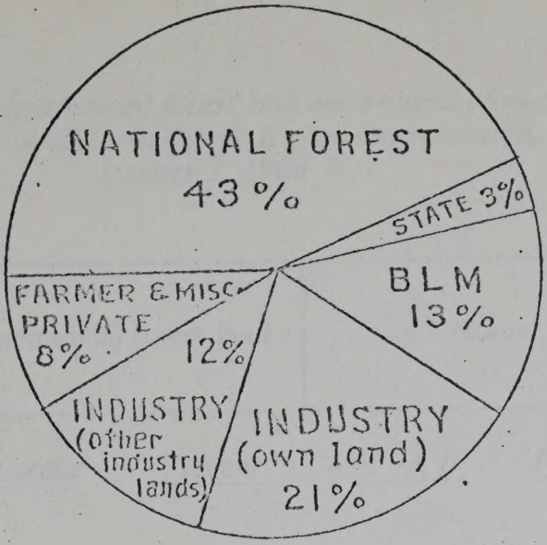
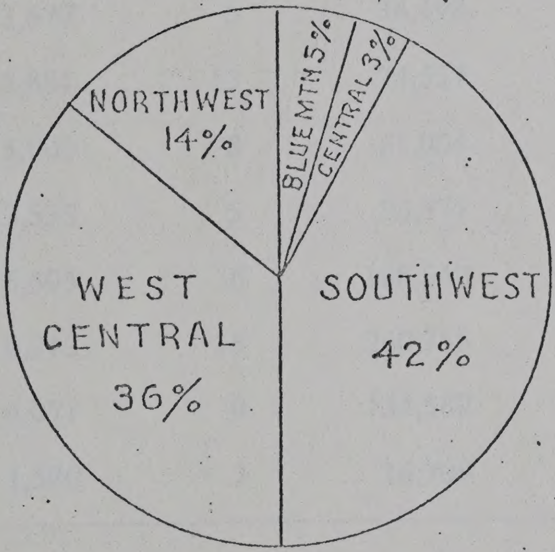


Figure 6.--Veneer and Plywood Log Consumption by Area, 1968



Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics" Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 86–Area of commercial forest land and volume of sawtimber in the Columbia-North Pacific Region, by subregion, January 1, 1966

Subregion	Commercial forest land		Volume[1]		Average volume per acre
	M acres	*Percent*	*MM bd. ft.*	*Percent*	*Bd. ft.*
Clark Fork-Kootenai-Spokane	15,737	23	115,802	11	7,359
Upper Columbia	4,881	7	37,266	3	7,635
Yakima	1,645	2	29,168	3	17,731
Upper Snake	2,225	3	15,684	2	7,049
Central Snake	3,677	5	34,498	3	9,382
Lower Snake	8,881	13	74,557	7	8,395
Mid-Columbia	5,908	8	61,964	6	10,488
Lower Columbia	3,535	5	96,571	9	27,319
Willamette	5,895	8	168,542	16	28,591
Coastal	10,213	15	260,365	25	25,493
Puget Sound	6,071	9	134,589	13	22,169
Oregon Closed Basin	1,580	2	16,709	2	10,575
Total	70,248	100	1,045,715	100	14,886

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[1] International 1/4-inch rule.

Source: "Projected Developments of the Timber Economy of the Columbia - N. Pacific Region", Pac. NW Forest and Range Experiment Station, USDA, 1969.

TABLE 87

NET ANNUAL GROWTH AND CUT ON COMMERCIAL FOREST LAND IN OREGON, 1962

	All Ownerships		National Forest		Other Public		Forest Industry		Small Private	
	Growth	Cut	Growth	Cut	Growth	Cut	Growth	Cut	Growth	Cut
(THOUSAND CUBIC FEET)										
W. Oregon	595,000	1,337,879	65,000	422,484	161,000	238,258	188,835	598,441	180,165	78,696
E. Oregon	279,000	279,544	149,000	162,326	7,000	14,078	53,640	70,668	69,360	32,472
TOTAL	874,000	1,617,423	214,000	584,810	168,000	252,336	242,475	669,109	249,525	111,168
THOUSAND BOARD FEET - INTERNATIONAL RULE										
W. Oregon	2,700,000	9,093,388	380,000	2,870,000	780,000	1,619,259	798,875	4,066,923	741,125	536,502
E. Oregon	955,000	1,702,004	455,000	988,329	22,000	85,713	219,350	430,259	258,650	197,703
TOTAL	3,655,000	10,795,392	835,000	3,859,033	802,000	1,704,972	1,018,225	4,497,182	999,775	734,205

TABLE 83

DISTRIBUTION OF WESTERN OREGON GROWING STOCK OF TIMBER (IN PERCENT) [5/]

Diameter Classes	National Forest 1963	National Forest 1985	Private 1963	Private 1985	Other Public (BLM) 1963	Other Public (BLM) 1985
6-10	6	8	11	25	7	13
12-18	18	21	23	43	19	34
20-28	25	26	21	20	24	32
30-38	22	20	16	5	20	13
40-48	16	13	13	2	13	3
50-58	8	7	8	2	9	2
60+	5	5	8	3	8	3

[5/] "Prospective Timber Supplies and Forest Industrial Development in Willamette River Basin," Pacific Northwest Forest and Range Experiment Station, 1965

Table 87.–*Roundwood consumption by the lumber and wood products industry in the Columbia-North Pacific Region, by type of use, 1965, with projections to the year 2020*[1]

(In million cubic feet)

Type of use	1965	1970	1980	1990	2000	2010	2020
Veneer logs	878	836	926	978	1,112	1,173	1,228
Saw logs	2,343	1,957	1,819	1,753	1,734	1,715	1,663
Miscellaneous wood products	128[2]	137	155	176	186	186	176
Foreign log exports	150	286	337	295	195	121	57
Total roundwood	3,499	3,216	3,237	3,202	3,227	3,195	3,124

Source: "Projected Developments of the Timber Economy of the Columbia - N. Pacific Region", Pac. NW Forest and Range Experiment Station, USDA, 1969.

Table 90—Total output of timber products, by product and by subregion and State, in the Columbia-North Pacific Region, 1965

Subregion and State	Lumber[1]	Plywood[2] (3/8-inch)	Woodpulp[3]	Particle-board (3/4-inch)[4]	Miscellaneous products[5]	Foreign log exports[6]
	M bd. ft.	*MM sq. ft.*	*Tons*	*MM sq. ft.*	*M cu. ft.*	*M cu. ft.*
1. Clark Fork-Kootenai-Spokane:						
Idaho	685,788	67	–	3	3,288[7]	–
Montana	1,254,070	465	270,000	–	3,004[7]	–
Washington	168,403	–	45,232	–	2,138	–
Total	2,108,261	532	315,232	3	8,430	–
2. Upper Columbia:						
Washington	531,116	–	16,507	–	6,740	500
3. Yakima:						
Washington	260,886	125	–	–	3,310	–
4. Upper Snake:						
Idaho	48,131	–	–	–	214	–
Wyoming	2,889	–	–	–	6	–
Total	51,020	–	–	–	220[7]	–
5. Central Snake:						
Idaho	306,286	51	–	–	2,158[7]	–
Oregon	69,560	18	–	–	189	–
Total	375,846	69	–	–	2,347	–
6. Lower Snake:						
Idaho	839,795	148	251,000	–	4,519[7]	–
Oregon	245,283	102	–	–	665	–
Washington	2,096	–	–	–	27	–
Total	1,087,174	250	251,000	–	5,211	–
7. Mid-Columbia:						
Oregon	1,052,479	144	53,948	17	3,366	–
Washington	219,499	69	165,070	–	2,785	–
Total	1,271,978	213	219,018	17	6,151	–
8. Lower Columbia:						
Oregon	329,832	156	132,523	–	2,056	–
Washington	949,994	642	1,517,003	3	14,833	12,250
Total	1,279,826	798	1,649,526	3	16,889	12,250
9. Willamette:						
Oregon	3,165,402	3,873	634,462	132	19,736	7,617
10. Coastal:						
Oregon	2,775,783	3,679	462,067	133	17,304	25,567
Washington	432,784	254	247,607	–	6,758	45,433
Total	3,208,567	3,933	709,674	133	24,062	71,000
11. Puget Sound:						
Washington	1,435,222	1,278	1,595,581	–	22,409	58,800
12. Oregon Closed Basin:						
Oregon	181,173	10	–	–	492	–
Grand total	14,956,471	11,081	5,391,000	288	115,997	150,167

[1] Based on "1964-65 Statistical Yearbook" by Western Wood Products Association (1966).

[2] Based on 1965 American Plywood Association softwood plywood data and forest industries hardwood plywood data.

[3] Estimates of woodpulp production based on preliminary wood consumption data for the West (U.S. Bureau of Census

[4] Based on 1965 U.S. Census of Manufactures data.

[5] Pilings, poles, posts, fuelwood, ties, excelsior, shingles, bolts, etc.

[6] Based on 1965 U.S. Department of Commerce data.

[7] 1964 data (Intermountain Forest and Range Experiment Station).

Washington total 3,587,000

Oregon total 1,283,000

Source: "Projected Developments of the Timber Economy of the Columbia-N. Pacific Region", Pac. NW Forest and Range Experiment Station, USDA, 1969.

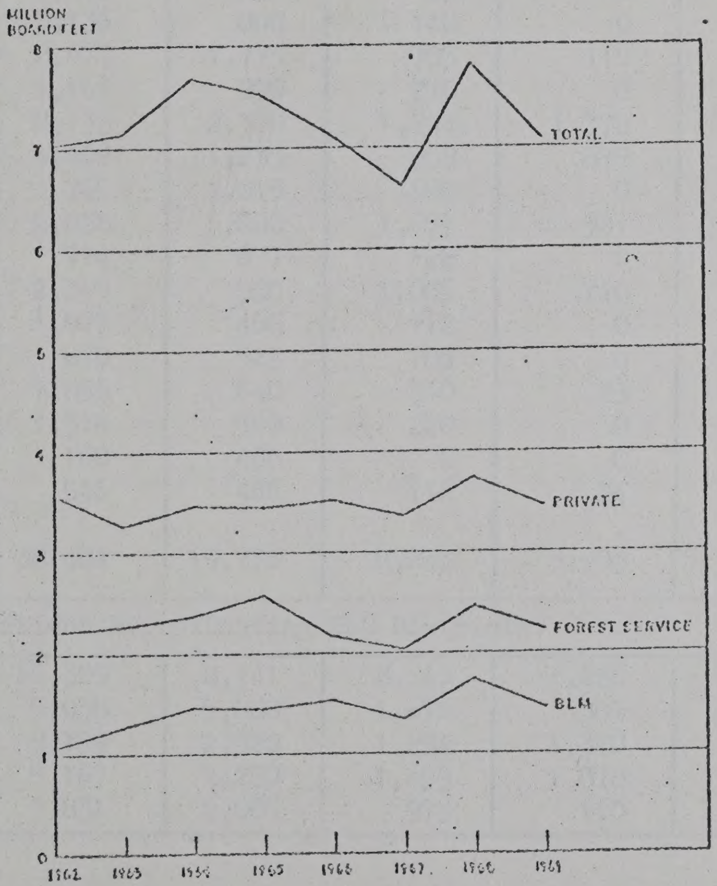
Table 91

Log Production in Western Oregon
(Million Board Feet)

	Total	Private	BLM	Forest Service	Other
1962	7,031,690	3,557,388	1,084,495	2,222,200	167,607
1963	7,120,629	3,286,876	1,344,172	2,280,600	208,981
1964	7,692,580	3,469,082	1,614,900	2,366,600	241,998
1965	7,530,272	3,451,309	1,227,995	2,599,500	251,468
1966	7,118,824	3,517,276	1,200,955	2,179,400	221,193
1967	6,616,616	3,364,464	1,064,993	2,046,900	140,259
1968	7,800,453	3,735,658	1,430,983	2,459,074	174,738
1969	7,092,869	3,465,627	1,179,693	2,233,410	214,139
1962-69 Average	7,250,490	3,480,960	1,268,520	2,298,460	202,547

CHART 8

Log Production for Western Oregon



Source: "An Economic Assessment of the BLM's Allowable Cut Plan for Western Oregon", State of Oregon Executive Department, 1971.

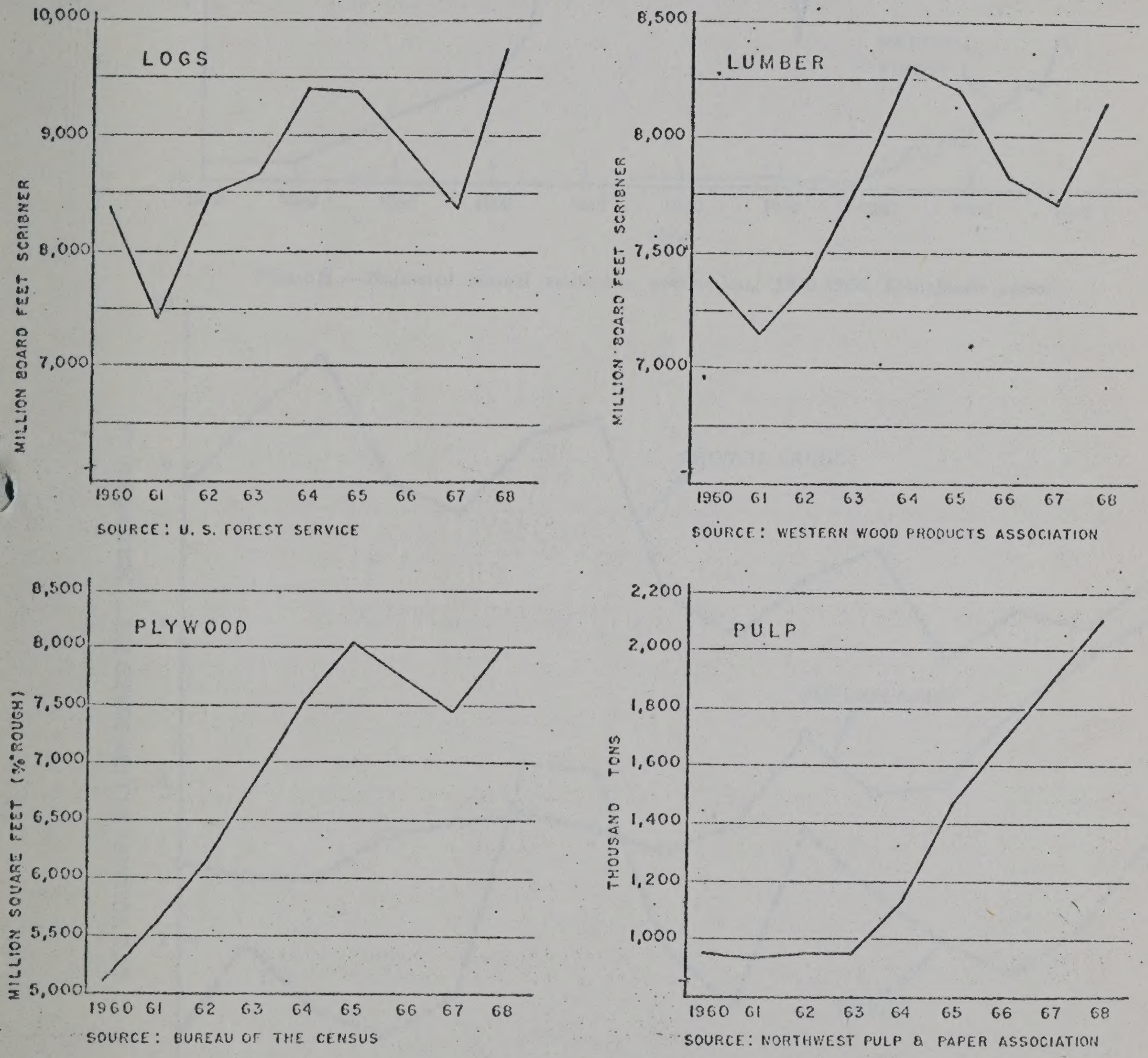
: Table 92
Forest Industry Capacity

	1 Logging M/Day	2 Sawmill M/Day	3 Softwood Plywood 3/8" base Per Day	4 Plywood Veneer 3/8" base Per Day	5 Boards* M' on 1/8" base Per Day	6 Pulp and Paper Products** Tons/Day
Benton	1,542	885	440	375	90	50
Clackamas	1,635	1,345	0	92	0	2,640
Clatsop	1,147	237	80	0	0	0
Columbia	3,136	860	140	0	496	3,190
Coos	2,677	1,775	703	110	370	340
Curry	1,154	290	270	0	0	0
Douglas	8,139	2,320	1,294	1,378	780	1,075
Jackson	4,402	1,235	959	878	660	0
Josephine	765	1,015	500	0	0	0
Lane	5,038	5,000	1,671	301	730	2,300
Lincoln	714	677	128	0	0	1,915
Linn	2,315	990	1,085	720	822	1,250
Marion	1,075	488	112	0	0	425
Multnomah	870	525	185	0	0	333
Polk	1,855	640	340	25	0	0
Tillamook	1,314	560	220	0	0	0
Washington	160	468	0	0	85	80
Yamhill	546	466	116	24	0	210
W. Oregon	38,484	19,776	8,243	3,903	3,948	13,808
County Aggregations Approximating BLM Districts:						
Salem	16,309	8,141	2,846	1,236	1,408	10,093
Eugene	5,038	5,000	1,671	301	730	2,300
Roseburg	8,139	2,320	1,294	1,378	780	1,075
Medford	5,167	2,250	1,459	1 878	660	0
Coos Bay	3,831	2,065	973	110	370	250

* Includes Insulation, Particle and Hardboard.

** Includes Paper, Roofing, Pulp and Corrugated Board.

Figure 7.--Output of Major Timber Products in Oregon, 1960-1968.



SOURCE: U. S. FOREST SERVICE

SOURCE: WESTERN WOOD PRODUCTS ASSOCIATION

SOURCE: BUREAU OF THE CENSUS

SOURCE: NORTHWEST PULP & PAPER ASSOCIATION

Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics" Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

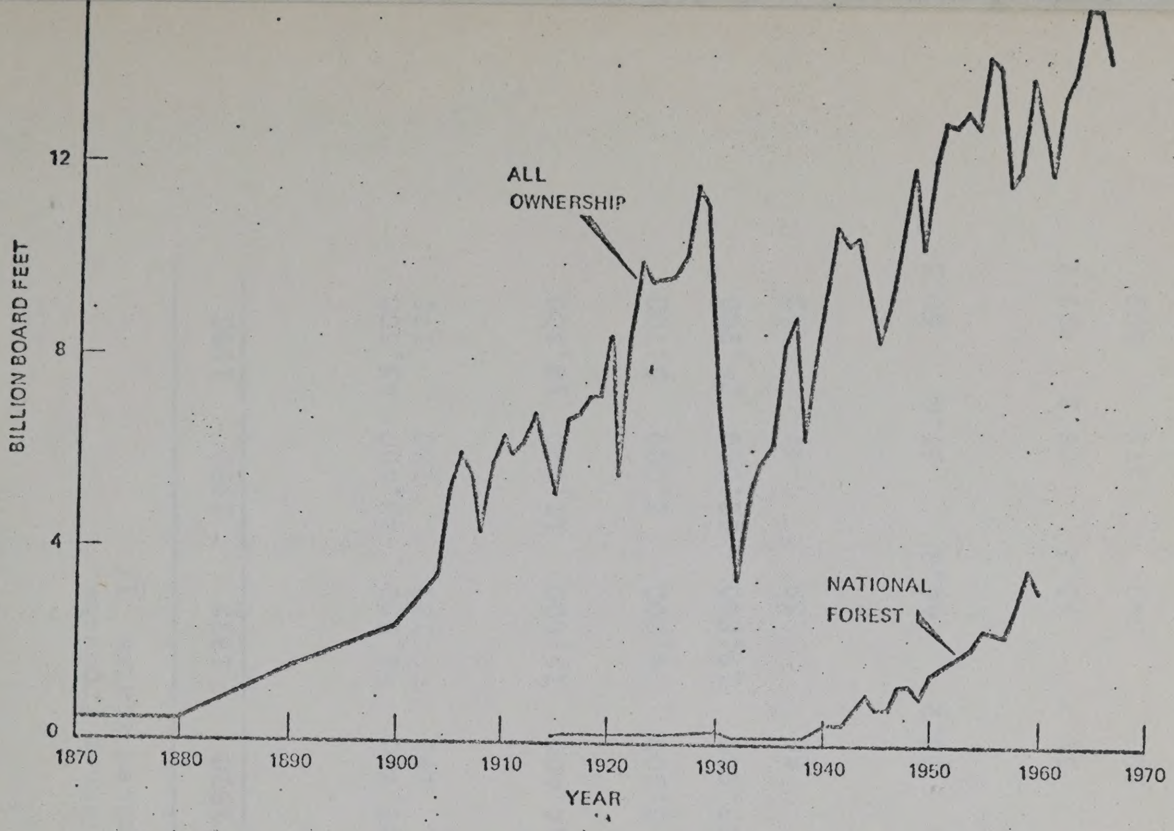


Figure 8.—Estimated annual sawtimber production, 1870-1966, Douglas-fir region.

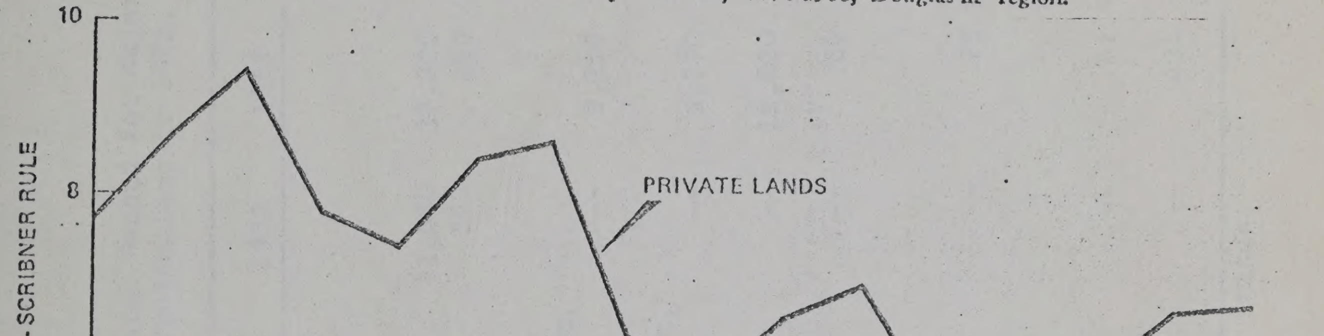


Figure 9.—Estimated private and public log production and National Forest stumpage prices for 1950-65, Douglas-fir Region of Washington and Oregon.

Source: "Douglas Fir Supply Study", Pac. NW Forest & Range Exp. Station, USDA, 1969.

Table 93 - Summary of Total Demand for Major Timber Products, 1952 and 1962, with Projections to 1985, United States [1/]

Product	Standard unit of measure	1952	1962	1970	1975	1980	1985
Lumber:							
Total	Million board feet	41,460	37,300	39,700	41,600	43,400	45,500
Per capita	Board feet	263	200	191	187	180	175
Plywood and veneer:							
Softwoods	Million square feet, 3/8-inch basis	--	9,250	14,400	15,600	17,000	18,500
Hardwoods	Million square feet, 3/8-inch basis	--	2,770	3.500	4,200	5,000	5.700
Total		--	12,020	17,900	19,800	22,000	24,200
Per capita	Square feet	--	64	86	89	91	93
Woodpulp:							
Total	Million tons	--	29.5	38.2	44.8	52.4	60.5
Paper and board:							
Total	Million tons	--	42.4	52.7	60.2	69.3	79.2
Per Capita	Pounds	--	454	507	540	575	609

[1/] Source: Timber Trends in the United States.

Table 94

Present and Projected Forest Industrial Employment Levels in Oregon

	All Forest Industries			Logging			Sawmills & Planing Mills		
Year	Total	E.Oreg.	W.Oreg.	Total	E.Oreg.	W.Oreg.	Total	E.Oreg.	W.Oreg.
1962	76,554	10,606	65,948	12,380	1,333	11,047	26,600	7,503	19,097
1970	73,900	10,900	63,000	11,600	1,400	10,200	18,200	6,800	11,400
1980	67,200	9,700	57,500	10,900	1,100	9,800	13,000	5,300	7,770

	Veneer and Plywood			Paper and Allied Products		
	Total	E.Oreg.	W.Oreg.	Total	E.Oreg.	W.Oreg.
1962	23,693	380	23,313	7,278	275	7,003
1970	28,800	1,300	27,500	6,800	1,100	5,700
1980	27,700	1,700	26,000	8,700	500	8,200

EMPLOYMENT IN THE LUMBER AND WOOD PRODUCTS INDUSTRY 1950-1975

Table 95

YEAR	LOGGING 1/	SAWMILLS	PLYWOOD AND VENEER	OTHER WOOD PRODUCTS 2/	TOTAL 1&2/
1950	27,400	42,300	7,200	7,200	84,100
1951	29,400	45,000	8,800	6,900	90,100
1952	27,100	44,000	10,600	6,600	88,300
1953	23,800	43,500	11,300	6,600	85,200
1954	21,700	40,900	11,700	5,400	79,700
1955	22,600	43,600	13,700	5,800	85,700
1956	21,300	39,500	15,600	5,900	82,300
1957	17,700	34,800	16,600	5,400	74,500
1958	17,200	31,600	18,500	5,600	72,900
1959	17,500	33,400	20,900	5,800	77,600
1960	16,000	31,100	21,900	5,700	74,700
1961	14,600	27,200	22,600	5,700	70,100
1962	15,100	26,800	24,000	5,900	71,800
1963	15,200	26,200	24,200	6,200	71,800
1964	16,100	26,300	26,500	6,600	75,500
1965	15,600	25,900	27,200	6,900	75,600
1970	12,500 ± 1,200	22,700 ± 2,000	31,000	8,000	74,200 ± 3,200
1975	10,900 ± 1,000	20,700 ± 1,800	33,900	9,000	74,500 ± 2,800

1/ Includes self-employed loggers

2/ Includes hardboard for years beginning with 1961

Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment, 1968.

TABLE 96

EMPLOYMENT, AVERAGE WEEKLY HOURS, PRODUCTION, AND PRODUCTIVITY RATES FOR THE SAWMILL INDUSTRY, 1950-1975

YEAR	TOTAL EMPLOY-MENT	PRODUCTION WORKERS	AVERAGE WEEKLY HOURS	TOTAL PRODUCTION 1/	PRODUC-TIVITY RATE 2/
1950	42,300	39,200	38.8	8,239,000	104.2
1951	45,000	41,300	38.5	8,219,000	99.4
1952	44,000	40,200	38.8	9,037,000	111.4
1953	43,500	39,600	38.6	8,423,000	106.0
1954	40,900	37,100	39.0	8,851,000	117.6
1955	43,600	40,000	38.3	9,181,000	115.2
1956	39,500	36,100	38.7	8,361,000	115.1
1957	34,800	31,500	38.6	6,895,000	109.1
1958	31,600	28,600	37.9	7,545,000	133.9
1959	33,400	30,100	32.5	8,222,000	136.4
1960	31,100	27,900	37.7	7,549,000	138.0
1961	27,200	24,300	38.1	7,366,000	153.0
1962	26,800	24,100	39.3	7,712,000	156.6
1963	26,200	23,500	39.7	7,818,000	161.2
1964	26,300	23,900	40.0	8,297,000	166.9
1965	25,900	23,700	40.1	8,247,000	166.9
1970	22,700 ± 2,000	20,400 ± 1,800	40.0	8,000,000	188.5
1975	20,700 ± 1,800	18,500 ± 1,600	40.0	8,000,000	208.2

1/ Thousands of board feet

2/ Board feet per production worker per hour

Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment, 1968.

Table 97

EMPLOYMENT, AVERAGE WEEKLY HOURS, PRODUCTION AND PRODUCTIVITY RATES FOR THE PLYWOOD AND VENEER INDUSTRY 1950 - 1975

YEAR	TOTAL EMPLOY-MENT	PRODUCTION WORKERS	AVERAGE WEEKLY HOURS	TOTAL PRODUCTION 1/	PRODUC-TIVITY RATE 2/
1950	7,200	6,800	42.3	1,039,763	69.5
1951	8,800	8,200	42.0	1,189,409	66.4
1952	10,600	9,800	39.3	1,346,334	67.2
1953	11,300	10,500	39.4	1,752,013	81.4
1954	11,700	10,800	41.5	2,080,614	88.9
1955	13,700	12,600	41.4	2,753,898	101.5
1956	15,600	14,500	40.7	3,051,702	99.4
1957	16,600	15,600	39.0	3,407,588	107.7
1958	18,500	17,200	40.6	4,210,396	115.9
1959	20,900	19,700	40.8	5,121,254	122.5
1960	21,900	20,600	38.7	5,159,939	124.5
1961	22,600	21,100	40.6	5,679,563	127.5
1962	24,000	22,300	41.1	6,328,853	132.8
1963	24,200	22,500	41.6	6,794,660	139.6
1964	26,500	24,500	42.4	7,741,853	143.3
1965	27,200	24,600	42.2	8,017,769	148.5
1970	31,000	28,800	40.0	10,267,000	171.3
1975	33,900	31,500	40.0	12,732,000	194.1

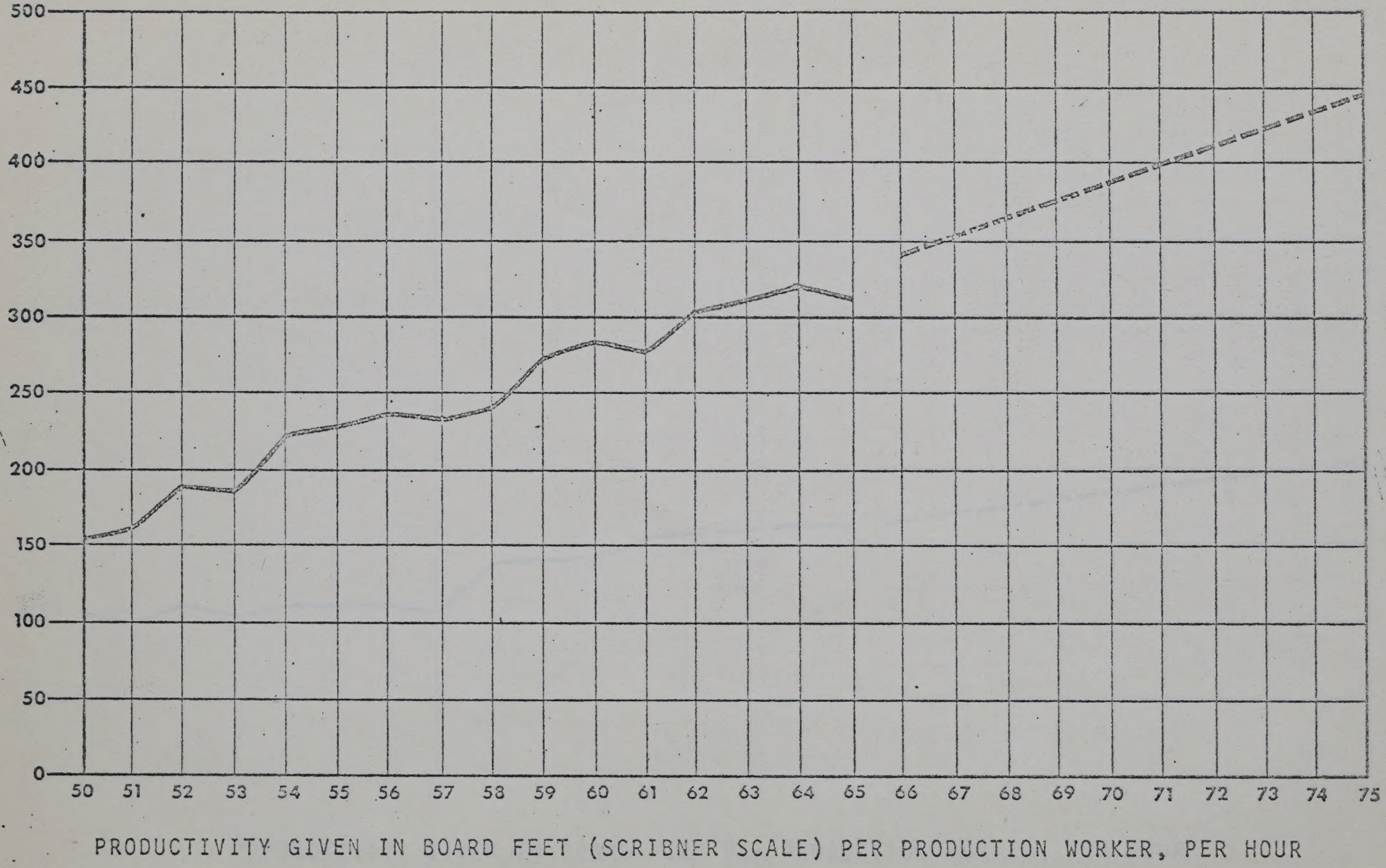
1/ Thousands of square feet on a 3/8 inch basis

2/ Square feet on a 3/8 inch basis per production worker per hour

Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment, 1968.

Figure 10

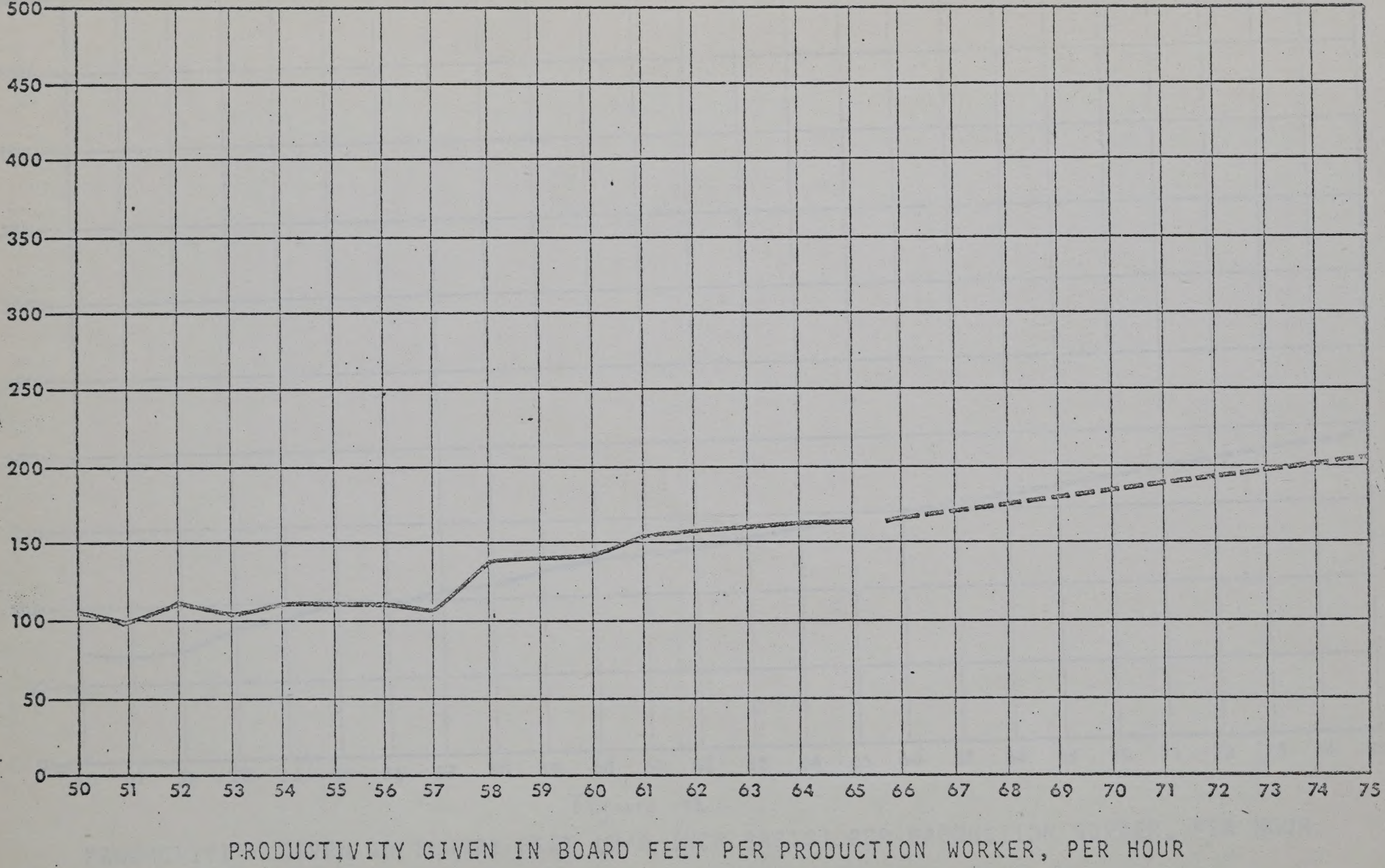
OREGON WORKER PRODUCTIVITY IN THE LOGGING INDUSTRY 1950 - 1975



Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment, 1968. 192

Figure 11

OREGON WORKER PRODUCTIVITY IN THE SAWMILL INDUSTRY 1950 - 1975



Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment, 1968. 193

OREGON WORKER PRODUCTIVITY IN THE PLYWOOD AND VENEER INDUSTRY 1950 - 1975

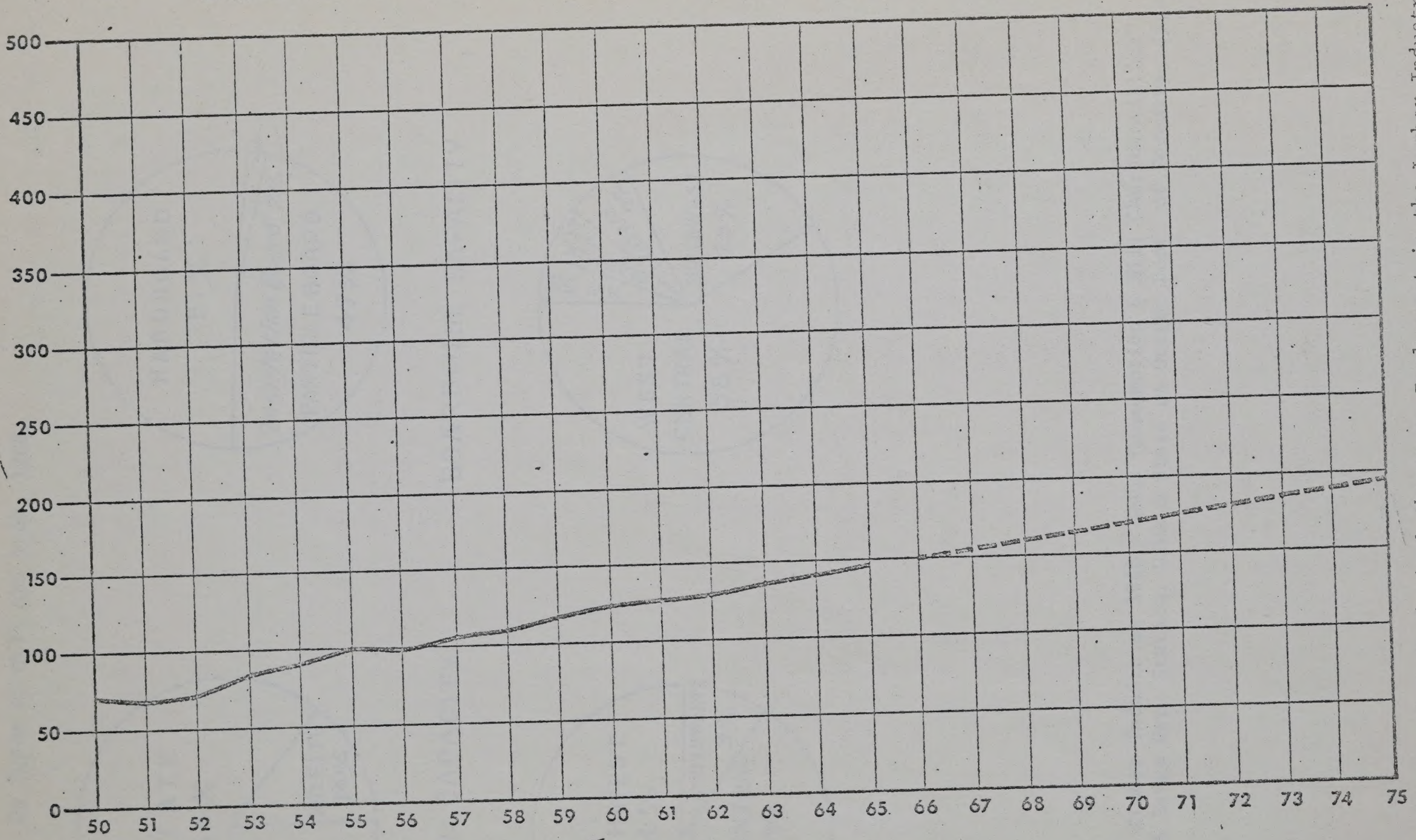
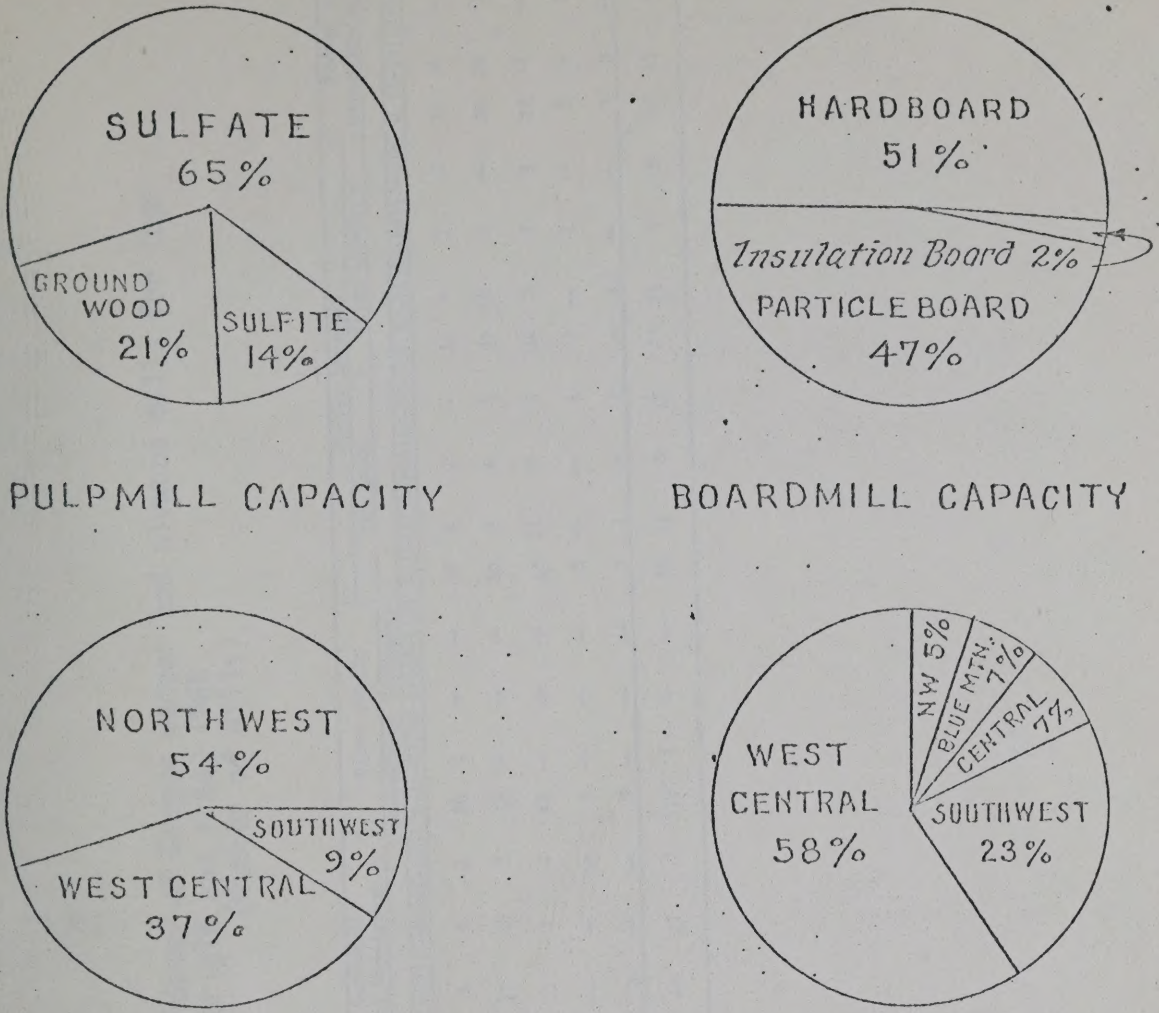


Figure 12

PRODUCTIVITY GIVEN IN SQUARE FEET (3/8 INCH BASIS) PER PRODUCTION WORKER, PER HOUR

Source: "The Effects of Technological Change on Employment in the Lumber Industry", State of Oregon Department of Employment., 1968. 1974

Figure 13 .--*Distribution of Capacity of Pulpmills and Board Mills by Types of Mill and Area, 1968.*



Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics" Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 98.--Relative dependency of Oregon veneer and plywood mills for logs by ownership origin and area, 1968

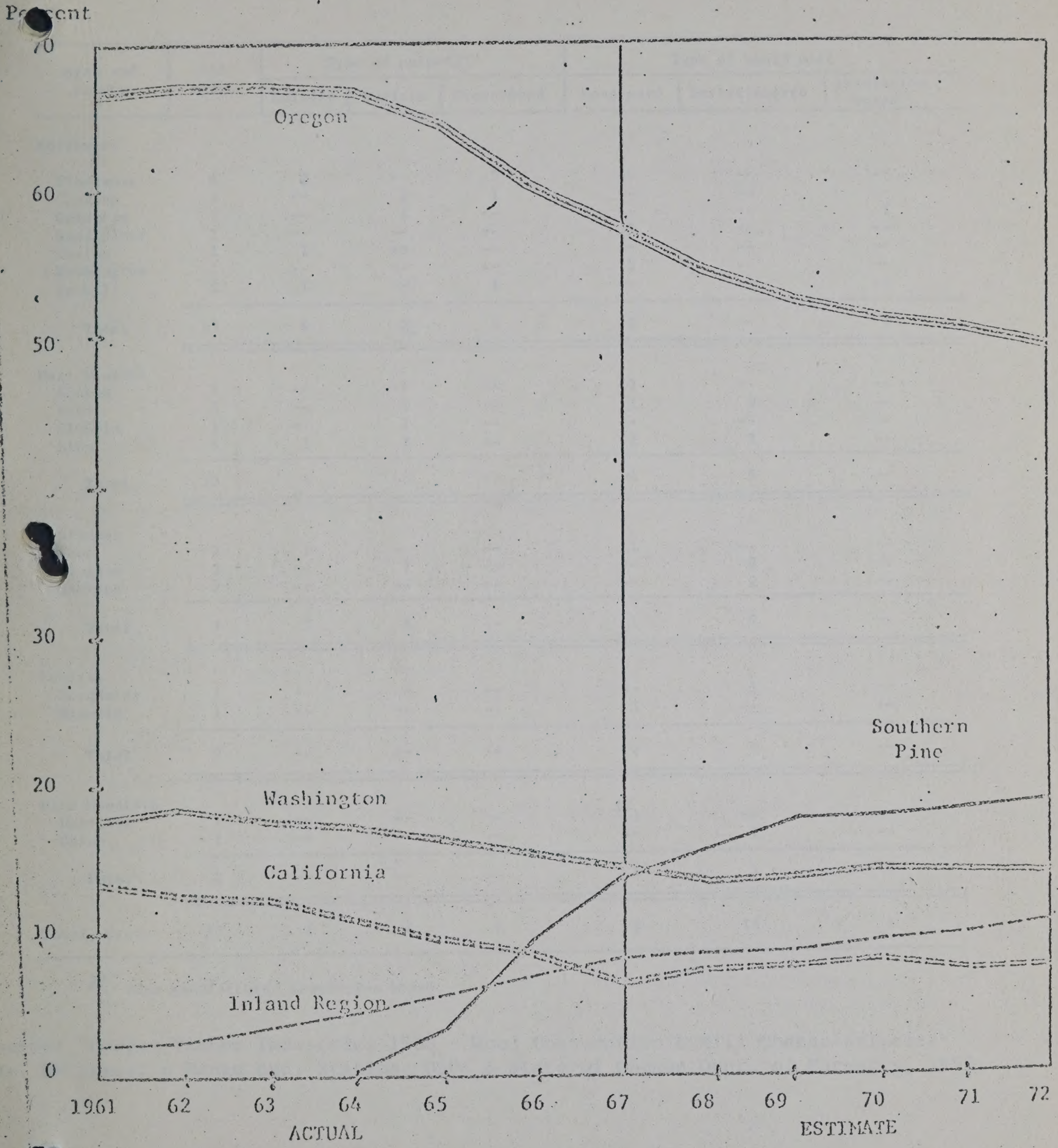
(Number of mills)

Area	National Forest				State				Bureau of Land Management				Other public				Forest industry								Farmer and miscellaneous private			
																	Own lands				Other industry							
	Dependency (percent)																											
	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100
Northwest	5	8	3	5	13	5	3	--	11	5	4	1	20	1	--	--	14	4	1	2	11	6	1	3	14	6	--	1
West Central	9	5	19	13	44	2	--	--	14	24	6	2	46	--	--	--	30	6	4	6	27	14	5	--	28	14	3	1
Southwest	9	16	8	8	35	6	--	--	17	13	7	4	41	--	--	--	18	11	3	9	34	3	2	2	22	17	--	2
Central	1	1	2	--	4	--	--	--	4	--	--	--	4	--	--	--	3	--	--	1	3	--	1	--	2	--	1	1
Blue Mountain	--	2	--	3	5	--	--	--	3	2	--	--	5	--	--	--	3	1	--	1	4	1	--	--	1	3	--	1
Total, State	24	32	32	29	101	13	3	--	49	44	17	7	116	1	--	--	68	22	8	19	79	24	9	5	67	40	4	6

"Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics" 89
NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry,
1968.

CHART 9

SOFTWOOD PLYWOOD PRODUCTION7/
PERCENTAGE BY STATE AND REGION
1961 - 1972 (est.)



Source: "An Economic Assessment of the BLM's Allowable Cut Plan for Western Oregon", State of Oregon Executive Department, 1971.

Table 99.--Number of pulp and board mills in Oregon by type of mill, area, and county, 1968

Area and county	All mills	Type of pulpmill			Type of board mill		
		Sulfite	Sulfate	Groundwood	Hardboard	Particleboard	Insulation board
Northwest							
Clackamas	4	2	--	2	--	--	--
Clatsop	2	--	1	1	--	--	--
Columbia	2	--	1	--	--	--	1
Hood River	1	--	--	--	1	--	--
Marion	1	1	--	--	--	--	--
Washington	1	--	--	--	1	--	--
Yamhill	2	1	--	1	--	--	--
Total	13	4	2	4	2	--	1
West Central							
Benton	1	--	--	--	1	--	--
Lane	5	--	1	--	1	3	--
Lincoln	1	--	1	--	--	--	--
Linn	6	1	1	--	2	2	--
Total	13	1	3	--	4	5	--
[illegible]uthwest							
[illegible]oos	2	1	--	--	1	--	--
[illegible]ouglas	3	--	1	--	--	2	--
Jackson	2	--	--	--	--	2	--
Total	7	1	1	--	1	4	--
Central							
Deschutes	1	--	--	--	--	1	--
Klamath	1	--	--	--	1	--	--
Total	2	--	--	--	1	1	--
Blue Mountain							
Umatilla	1	--	--	--	[1]1	--	--
Union	1	--	--	--	--	1	--
Total	2	--	--	--	1	1	--
Total, State	37	6	6	4	9	11	1

[1] Also manufactures insulation board.

ource: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics"
ac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 100--Installed 24-hour capacity of pulp and board mills in Oregon
type of mill, area, and county, 1968
(Tons)

Area and county	All mills	Type of pulpmill			Type of board mill		
		Sulfite	Sulfate	Groundwood	Hardboard	Particleboard	Insulatio board
Northwest							
Clackamas	1,185	400	--	785	--	--	--
Clatsop	1,000	--	700	300	--	--	--
Columbia	950	--	800	--	--	--	150
Hood River	92	--	--	--	92	--	--
Marion	240	240	--	--	--	--	--
Washington	80	--	--	--	80	--	--
Yamhill	660	220	--	440	--	--	--
Total	4,207	860	1,500	1,525	172	--	150
West Central							
Benton	110	--	--	--	110	--	--
Lane	1,729	--	1,075	--	288	366	--
Lincoln	965	--	965	--	--	--	--
Linn	3,494	95	570	--	2,089	740	--
Total	6,298	95	2,610	--	2,487	1,106	--
Southwest							
Coos	275	85	--	--	190	--	--
Douglas	1,210	--	550	--	--	660	--
Jackson	580	--	--	--	--	580	--
Total	2,065	85	550	--	190	1,240	--
Central							
Deschutes	300	--	--	--	--	300	--
Klamath	140	--	--	--	140	--	--
Total	440	--	--	--	140	300	--
Blue Mountain							
Umatilla	155	--	--	--	1/ 155	--	--
Union	250	--	--	--	--	250	--
Total	405	--	--	--	155	250	--
Total, State	13,415	1,040	4,660	1,525	3,144	2,896	150

1/ Plant capacity can be used interchangeably to produce insulation board.

Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics", Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 101.--Ownership origin of logs consumed by pulp and board mills in Oregon by area, 1968

(Thousand board feet, Scribner log rule)

Area	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneou private
						Own lands	Other industry	
Northwest and Southwest[1]	80,350	221	2,915	2,783	--	68,089	5,786	556
West Central	--	--	--	--	--	--	--	--
Central	--	--	--	--	--	--	--	--
Blue Mountain	--	--	--	--	--	--	--	--
Total, State	80,350	221	2,915	2,783	--	68,089	5,786	556

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[1] Combined to avoid disclosure.

Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics", Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 102.--Relative dependency of pulp and board plants in Oregon for logs by ownership origin and area, 1968
(Number of plants)

Area	National Forest				State				Bureau of Land Management				Other public				Forest industry								Farmer and miscellaneous private			
																	Own lands				Other industry							
	Dependency (percent)																											
	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100
Northwest and Southwest[1]	3	2	--	--	2	2	1	--	4	--	1	--	5	--	--	--	1	2	--	2	2	2	1	--	2	2	1	--
West Central	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Central	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue Mountain	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total, State	3	2	--	--	2	2	1	--	4	--	1	--	5	--	--	--	1	2	--	2	2	2	1	--	2	2	1	--

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[1] Combined to avoid disclosure.

Sou . "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics" 103
Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 103

NORTHWEST PULP AND PAPER ASSOCIATION

ECONOMIC SURVEY

OREGON

Annual Volume and Dollars

Year	Number of Mill Employees	Dollar Value of Mill Payroll	Capital Investment*	Pulp Production in Tons	Paper and Board Production in Tons
1947	3,375	$10,405,289	$ 36,720,090	431,467	349,208
1951	3,905	16,103,161	66,935,823	555,243	525,656
1956	4,197	22,070,595	113,453,473	828,386	752,880
1957	4,117	21,932,842	122,957,613	839,957	772,064
1958	4,234	24,636,299	154,955,782	813,811	896,230
1959	4,179	25,207,815	156,655,079	865,825	942,800
1960	4,222	26,497,712	169,026,176	955,619	1,030,800
1961	4,309	27,158,982	185,464,458	913,892	991,609
1962	4,320	28,182,174	188,794,922	942,663	1,037,911
1963	4,460	30,178,892	200,086,388	940,314	1,062,535
1964	4,692	33,531,786	246,012,102	1,118,899	1,243,013
1965	4,771	38,990,408	252,149,850	1,475,068	1,453,062
1966	5,111	43,706,678	296,206,290	1,733,870	1,717,395
1967	5,417	50,538,947	383,037,070	1,843,796	1,871,644
1968	5,613	56,525,930	382,587,663	2,106,170	2,080,546
1969	5,967	63,695,409	374,325,084	2,233,296	2,214,796
1970	6,199	69,988,393	372,226,609	2,422,120	2,335,230

Table 104--Number of shake and shingle mills in Oregon and their installed 8-hour capacity, by area and county, 1968

Area and county	Mills	Capacity
	Number	Squares
Northwest		
Clackamas	2	128
Columbia	2	54
Marion	1	100
Multnomah	2	258
Polk	3	245
Tillamook	10	528
Total	20	1,313
West Central		
Benton	1	20
Lane	14	733
Lincoln	3	242
Linn	7	230
Total	25	1,225
Southwest		
Douglas	3	308
Total, State	48	2,846

Table 105.--Average number of operating days per year by shake and shingl mills in Oregon by area, 1968

Area	Shake and shingle
Northwest	197
West Central	183
Southwest	210
Total, State	191

Source: "Oregon Timber Industries 1968 - Wood Consumption & Mill Characteristics", Pac. NW Forest & Range Exp. Station, USDA & State of Oregon Dept. of Forestry, 1968.

Table 106

Timber Harvest by Ownership in the State of Oregon, 1968[1]

(In thousands of board feet, Scribner log rule)

State and county	Private[2]			Bureau of Land Management[3]	National Forest[4]	Indian[5]	Other Federal[2]	State[2]	Other public[2]	Total
	Forest industry	Other	Total							
Western Oregon:										
Benton	12,589	20,999	33,588	47,133	18,577	--	--	2,413	--	101,711
Clackamas	115,013	25,951	140,964	49,084	233,383	--	3,214	--	--	426,645
Clatsop	336,544	6,399	342,943	--	--	--	--	37,728	37	380,708
Columbia	82,242	24,658	106,900	956	--	--	--	741	677	109,274
Coos	170,119	40,394	210,513	133,732	20,073	--	--	15,939	200	380,457
Curry	190,191	7,355	197,546	38,775	161,920	--	--	86	3,160	401,487
Douglas	744,582	67,692	812,274	552,354	473,230	--	--	18,508	63	1,856,429
Hood River	11,900	320	12,220	--	22,145	--	--	--	2,025	36,390
Jackson	225,279	13,602	238,881	132,642	176,779	--	--	3,428	--	551,730
Josephine	1,791	10,197	11,988	78,670	57,050	--	--	600	1,001	149,309
Lane	531,988	122,329	654,317	174,469	746,566	--	500	6,775	55	1,582,682
Lincoln	165,970	135,026	300,996	20,830	126,523	--	--	4,795	--	453,144
Linn	254,735	169,422	424,157	68,744	205,572	--	35	3,603	--	702,111
Marion	24,694	3,761	28,455	4,027	97,282	--	938	10,838	--	141,540
Multnomah	2,250	1,502	3,752	--	65,636	--	--	--	--	69,388
Polk	56,501	6,396	62,897	32,603	923	--	--	2,011	--	98,434
Tillamook	105,940	6,785	112,725	52,799	47,152	--	--	50,988	180	263,844
Washington	13,865	11,295	25,160	2,056	--	--	--	--	--	27,216
Yamhill	11,155	4,227	15,382	42,109	6,263	--	--	--	4,200	67,954
Total	3,057,348	678,310	3,735,658	1,430,983	2,459,074	--	4,687	158,453	11,598	7,800,453
Eastern Oregon:										
Baker	4,675	--	4,675	2,916	103,047	--	--	--	--	110,638
Crook	7,012	3,529	10,541	--	84,692	--	--	320	--	95,553
Deschutes	8,630	298	8,928	2,526	57,832	--	--	--	--	69,286
Gilliam	--	400	400	--	--	--	--	--	--	400
Grant	10,405	7,364	17,769	5,348	213,834	--	--	--	--	236,951
Harney	3,180	--	3,180	578	60,026	--	--	--	--	63,784
Jefferson	9,450	875	10,325	51	48,065	45,813	--	--	--	104,254
Klamath	132,593	35,782	168,375	20,250	207,316	--	--	2,549	--	398,490
Lake	198,118	48,440	246,558	--	149,573	--	--	--	--	396,131
Malheur	--	--	--	114	3	--	--	--	--	117
Morrow	12,862	7,913	20,775	--	2,459	--	--	--	--	23,234
Sherman	--	--	--	--	--	--	--	--	--	--
Umatilla	7,587	14,156	21,743	145	50,664	699	--	--	--	73,251
Union	15,845	13,757	29,602	971	50,002	--	--	--	--	80,575
Wallowa	49,106	3,722	52,828	2,195	98,851	--	--	--	--	153,874
Wasco	1,000	3,206	4,206	1,166	28,372	53,256	--	--	--	87,000
Wheeler	9,912	8,000	17,912	3,047	27,812	--	--	--	--	48,771
Total	470,375	147,442	617,817	39,307	1,182,548	99,768	--	2,869	--	1,942,309
Total, Oregon	3,527,723	825,752	4,353,475	1,470,290	3,641,622	99,768	4,687	161,322	11,598	9,742,762

[1] Includes volume removed as logs, poles and piling, but not volume removed for woodcutting operations.

[2] Compiled by State Forester.

[3] Compiled by U.S. Bureau of Land Management.

[4] Compiled by U.S. Forest Service, Region 6.

[5] Compiled by U.S. Bureau of Indian Affairs.

Prepared by Forest Survey Project, Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Portland, Oreg.

Table 107

Timber Harvest by Ownership in the State of Oregon, 1970[1]

(In thousands of board feet, Scribner log scale)

State and county	Private[2]			Bureau of Land Management[3]	National Forest[4]	Indian[5]	Other Federal[2]	State[2]	Other public[2]	Total
	Forest industry	Other	Total							
Western Oregon:										
Benton	34,991	17,318	52,309	49,745	28,447	--	--	8,764	--	139,265
Clackamas	109,070	6,219	115,289	31,394	181,969	--	--	-	--	328,652
Clatsop	276,466	5,090	281,556	--	--	--	--	21,693	--	303,249
Columbia	86,139	9,155	95,294	178	--	--	--	525	--	95,997
Coos	321,029	14,605	335,634	149,772	25,589	--	--	37,491	1,127	549,613
Curry	140,451	10,963	151,414	22,387	99,522	--	--	2,979	975	277,277
Douglas	660,937	33,683	694,620	340,209	337,303	--	--	18,112	1,116	1,391,360
Hood River	6,318	1,311	7,629	--	27,972	--	--	--	1,240	36,841
Jackson	153,943	8,021	161,964	66,437	84,824	--	1,300	--	--	314,525
Josephine	55	10,023	10,078	46,476	61,032	--	--	--	3,588	121,174
Lane	567,665	28,044	595,709	130,335	553,646	--	--	5,247	--	1,284,937
Lincoln	139,598	15,655	155,253	14,512	47,972	--	--	8,858	--	226,595
Linn	241,637	89,787	331,424	47,495	215,272	--	--	1,273	--	595,464
Marion	14,340	8,726	23,066	12,072	74,795	--	--	8,004	--	117,937
Multnomah	920	450	1,370	--	51,531	--	--	--	--	52,901
Polk	41,825	6,904	48,729	38,831	--	--	--	448	--	88,008
Tillamook	112,467	5,548	118,015	41,258	22,098	--	--	31,597	30	212,998
Washington	5,215	12,959	18,174	--	--	--	--	2,261	--	20,435
Yamhill	11,803	3,054	14,857	22,574	2,081	--	--	--	150	39,662
Total	2,924,869	287,515	3,212,384	1,013,675	1,814,053	--	1,300	147,252	8,226	6,196,890
Eastern Oregon:										
Baker	--	4,007	4,007	1,109	61,379	--	--	--	--	66,495
Crook	9,128	4,171	13,299	8,666	80,035	--	--	--	--	102,000
Deschutes	23,874	546	24,420	--	68,524	--	--	--	--	92,944
Gilliam	--	--	--	--	--	--	--	--	--	--
Grant	25,986	17,569	43,555	4,179	186,897	--	--	--	--	234,631
Harney	3,282	400	3,682	131	56,387	--	--	--	--	60,200
Jefferson	35,240	3,424	38,664	--	32,816	30,924	--	--	--	102,404
Klamath	221,357	7,792	229,149	6,667	193,646	--	--	747	--	430,209
ake	164,259	1,055	165,314	--	93,980	--	--	--	--	259,294
alheur	--	--	--	--	4	--	--	--	--	4
Morrow	13,372	2,914	16,286	1,033	11,152	--	--	--	--	28,471
Sherman	--	--	--	--	--	--	--	--	--	--
Umatilla	12,976	12,898	25,874	251	18,128	833	--	--	--	45,086
ion	38,458	15,976	54,434	101	74,095	--	--	1,650	--	130,280
llowa	15,712	20,195	35,907	86	56,639	--	--	--	--	92,632
asco	1,387	3,287	4,674	1,016	50,965	46,759	--	--	--	103,414
Wheeler	1,208	1,623	2,831	52	33,115	--	--	--	--	35,998
Total	566,239	95,857	662,096	23,291	1,017,762	78,516	--	2,397	--	1,784,062
Total Oregon	3,491,108	383,372	3,874,480	1,036,966	2,831,815	78,516	1,300	149,649	8,226	7,980,952

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[1] Includes volume removed as logs and poles and piling, but not volume removed for woodcutting operations.

[2] Compiled by State Forester.

[3] Compiled by U.S. Bureau of Land Management.

[4] Compiled by U.S. Forest Service, Region 6.

[5] Compiled by U.S. Bureau of Indian Affairs.

Prepared by Forest Survey Project, Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Portland, Oregon.

Keywords: Production economics, harvesting, logging, forest appraisal, timber.

Table 108

Employment Creditable to BLM Forest Resources In Western Oregon 1969[38/]

BLM District and County	Total Employmt	Wood Products Employmt	% Timber Employmt Creditable BLM Timber*	Wood Prod. Employmt. Creditable BLM	% BLM Employmt to Total Employmt	Wage Payments Creditable BLM Timber**
SALEM DISTRICT						
Coast Resources Area						
Benton	22,160	1,630	43.2	704	3.2	$5,585,536
Clatsop	11,470	1,030	0	0	0	0
Columbia	8,010	3,600	0	0	0	0
Lincoln	8,570	1,600	4.4	71	0.8	563,314
Polk	6,854	1,557	26.5	413	6.0	3,276,742
Tillamook	5,830	1,380	8.4	116	2.0	920,344
Washington	33,544	791	1.5	12	0	95,208
Yamhill	13,130	1,110	57.1	634	4.8	5,030,156
Subtotal	109,568	12,698	15.3	1,950	1.8	15,471,300
Cascade Resource Area						
Clackamas	26,591	4,172	7.4	309	1.2	2,451,606
Linn	27,660	6,270	12.9	809	2.9	6,418,606
Marion	43,411	1,019	7.1	72	0.2	571,248
Multnomah	230,758	6,550	0	0	0	0
Subtotal	328,420	18,011	6.6	1,190	0.4	9,441,460
Dist. Total	437,988	30,709	10.2	3,140	0.7	24,912,760
EUGENE DISTRICT						
Lane	82,750	15,150	14.7	2,227	2.7	17,669,018
ROSEBURG DISTRICT						
Douglas	26,720	7,700	21.5	1,656	6.2	13,138,704
COOS BAY DISTRICT						
Coos	20,770	5,680	36.4	2,068	10.0	16,407,512
Curry	4,490	1,480	6.5	96	2.1	761,664
Subtotal	25,260	7,160	20.8	1,489	5.9	17,169,176
MEDFORD DISTRICT						
Jackson	20,574	4,805	24.7	1,187	5.8	9,417,658
Josephine	7,030	1,836	47.8	878	12.5	6,966,052
Klamath	12,085	3,295	3.2	105	0.9	833,070
Subtotal	39,689	9,936	21.9	2,170	5.5	17,216,780
W. Ore. Total	612,407	70,655	15.1	10,682	1.7	$90,106,438

* Based on percent BLM 1969 timber harvest compared to total log harvest.
**Based on average salary for wood products industry in West. Oregon of $7,934.

Table 108, Cont.

Employment Creditable To BLM Resources In Oregon 1969 38/

County	Total Employment	Wood Products Employment	Wood Products Employment Creditable to BLM	BLM % Total Employment	BLM % Wood Products Employment	Livestock Employment	Livestock Employment Creditable BLM	Total Employment Creditable BLM Resources	BLM % Total Employment
BAKER DISTRICT									
Baker	3,146	545	5	-	0.8	1,146	28	33	1.0
Gilliam	294	0	0	0	0	114	1	1	0
Morrow	578	127	0	0	0	212	3	3	0
Umatilla	11,941	503	0	0	0	1,057	1	1	0
Union	3,877	1,131	9	-	0.8	480	0	9	0
Wallowa	1,081	212	1	-	0.2	522	2	3	0
Subtotal	20,917	2,518	15	0.07	0.8	3,531	35	50	0.2
PRINEVILLE DISTRICT									
Crook	2,687	1,277	0	0	0	443	25	25	0.9
Deschutes	8,208	1,707	10	-	0.6	597	22	32	0.4
Jefferson	1,881	349	0	0	0	313	1	1	0
Sherman	587	0	0	0	0	482	1	1	0.2
Wasco	4,648	337	0	0	0	1,058	2	2	0
Wheeler	370	264	0	0	0	222	5	5	1.4
Subtotal	18,381	3,934	10	0	0.2	3,115	56	66	0.3
BURNS DISTRICT									
Grant	1,979	724	13	-	1.8	475	19	32	1.6
Harney	1,819	641	37	2.0	5.7	560	95	132	7.2
Subtotal	3,798	1,365	50	1.3	3.7	1,035	114	164	4.3
VALE DISTRICT									
Malheur	4,076	47	47	1.2	100	908	152	199	4.8
LAKEVIEW DISTRICT									
Lake	1,639	407	0	0	0	527	68	68	4.1
E. Ore. Total	48,811	8,271	122	0	1.3	9,116	425	547	1.1
Oregon Total	661,218	78,926	10,804	1.6	13.7	9,116	425	11,229	1.7

TABLE 109

FEDERAL LAND OWNERSHIP IN OREGON BY AGENCY AND COUNTY
(Acres)

Administering Agencies	State	Baker	Benton	Clackamas	Clatsop	Columbia	Coos	Crook	Curry	Deschutes	Douglas
Department of Agriculture											
Agricultural Research Service	14,594										
Forest Service	15,001,833	644,953	15,512	511,669			54,071	434,792	546,752	966,846	897,829
Department of Commerce											
Maritime Administration	917				917						
Department of Defense											
Air Force	802	109	481	1							
Army	19,362 1/		532	80		855					36
Corps of Engineers	59,473			11	2,602		2,407				360
Navy	98,646				874						
Federal Aviation Agency	971									120	[illegible]
Federal Communications Commission	109										
Department of Health, Education and Welfare											
Public Health Service	1										
General Services Administration	07									3/	
Department of the Interior											
Bonneville Power Administration	1,511		1	23	5	2	75		3	40	21
Fish and Wildlife Service	444,024			126					21		
Bureau of Indian Affairs	1,219										
Bureau of Land Management											
Coos Bay Wagon Road Land	74,586						59,953				14,633
Oregon and California Railroad Revested Land	2,070,939		50,776	50,170		11,079	98,839		36,760		610,685
Controverted Oregon and California Land	462,697			35,949			23,002		56,735		95,641
Special Act Oregon and California Land	29,721		1,720	5,688							
Public Domain	13,299,411 2/	301,416	5,059	9,763	1,076		9,897	493,290	31,082	430,645	27,302
Total BLM	(15,937,354)	(301,416)	(57,555)	(101,570)	(1,076)	(11,079)	(191,691)	(493,290)	(124,577)	(430,645)	(748,261)
Bureau of Mines	47										
National Park Service	160,877				106						
Bureau of Reclamation	173,447	1,948						15,960		38,083	
Post Office Department	15	3/	1	3/	1		1			1	
Treasury Department											
Coast Guard	686				29		59		89		89
Veterans Administration	474										256
Total federal land	31,916,368	948,426	74,801	613,480	5,610	11,936	248,446	944,042	671,442	1,435,735	1,646,905
Total land area	61,641,600	1,973,760	427,520	1,209,600	524,800	413,440	1,031,040	1,907,200	1,038,080	1,937,280	3,239,680
Percent in federal ownership	51.8%	48.1%	17.3%	50.7%	1.1%	2.9%	24.1%	49.5%	64.7%	74.1%	50.8%

TABLE 109 (Continued)

Administering Agencies	Gilliam	Grant	Harney	Hood River	Jackson	Jefferson	Josephine	Klamath	Lake	Lane	Lincoln
Department of Agriculture											
Agricultural Research Service			14,594								
Forest Service		1,557,265	516,739	210,346	427,823	268,902	296,275	1,615,549	1,025,918	1,309,228	170,675
Department of Commerce											
Maritime Administration											
Department of Defense											
Air Force	67		40					1			
Army					478					3	
Corps of Engineers	2,961			737						30,830	36
Navy											
Federal Aviation Agency					80		283	160		111	
Federal Communications Commission											
General Services Administration					1			1			
Department of Health, Education and Welfare											
Public Health Service											
Department of the Interior											
Bonneville Power Administration				6				1		124	86
Fish and Wildlife Service			184,872					19,619	238,780		
Bureau of Indian Affairs			770			14		5			
Bureau of Land Management											
Coos Bay Wagon Road Land											
Oregon and California Railroad Revested Land					388,546		257,138	46,343		279,012	9,220
Controverted Oregon and California Land					25,332		109,244	20,962		95,312	
Special Act Oregon and California Land					20,971		182				
Public Domain	32,038	172,485	3,988,344	276	43,007	26,162	43,238	188,752	2,545,501	10,528	15
Total BLM	(32,038)	(172,485)	(3,988,344)	(276)	(477,856)	(26,162)	(409,802)	(256,057)	(2,545,501)	(348,852)	(24,[illegible])
Bureau of Mines											
National Park Service							480	160,290			
Bureau of Reclamation	6,650		8,515		8,624	1,567		2,064	520		
Post Office Department			1	3/			3/	1	1	1	
Treasury Department											
Coast Guard										256	65
Veterans Administration					193						
Total federal land	41,715	1,729,750	4,713,874	211,365	915,056	296,645	706,840	2,053,747	3,810,720	1,725,403	195,239
Total land area	775,040	2,900,480	6,484,480	338,560	1,80[illegible]880	1,148,160	1,040,000	3,822,720	5,292,800	2,926,720	[illegible]30,400
Percent in fed[illegible]ow[illegible]hip	5.4%	59.6%	72.7%	62.4%	[illegible]8%	25.8%	68%	53.7%	72%	58.9%	31%

TA[illegible] 109 (Continued)

Administering Agencies	Linn	Malheur	Marion	Morrow	Multnomah	Polk	Sherman	Tillamook	Umatilla	Union
Department of Agriculture										
Agricultural Research Service										
Forest Service	463,215	3,831	206,749	136,176	69,025			92,690	401,924	617,827
Department of Commerce										
Maritime Administration										
Department of Defense										
Air Force								77		
Army				9,084	164				8,129	
Corps of Engineers	4,969		3,396	2,679	294		1,388	125	5,961	
Navy										
Federal Aviation Agency										
Federal Communications Commission					109					
General Services Administration					5				3/	
Department of Health, Education and Welfare										
Public Health Service			1							
Department of the Interior										
Bonneville Power Administration	66		25	2	185	87	6	4	257	19
Fish and Wildlife Service								156	451	
Bureau of Indian Affairs			421						3/	
Bureau of Land Management										
Coos Bay Wagon Road Land										
Oregon and California Railroad Revested Land	85,646		20,712		4,247	41,045		27,570		
Controverted Oregon and California Land	520									
Special Act Oregon and California Land						1,160				
Public Domain	2,555	4,613,167		47,082	788	98	41,182	22,996	34,764	6,452
Total BLM	(88,721)	(4,613,167)	(20,712)	(47,082)	(5,035)	(42,303)	(41,182)	(50,566)	(34,764)	(6,452)
Bureau of Mines	47									
National Park Service										
Bureau of Reclamation		66,723		771			4,510		4,232	4,605
Post Office Department	3/		3		2			1	3/	1
Treasury Department										
Coast Guard					1			100		
Veterans Administration										
Total federal land	557,018	4,683,722	231,308	291,777	74,856	42,390	47,086	145,351	455,719	628,904
Total land area	1,468,460	6,316,800	750,720	1,317,760	271,360	472,960	531,200	713,600	2,067,840	1,300,480
Percent in federal ownership	37.9%	74.1%	30.8%	22.1%	27.5%	8.9%	8.8%	20.4%	22%	48.4%

TABLE 109 (Continued)

Administering Agencies	Wallowa	Wasco	Washington	Wheeler	Yamhill
Department of Agriculture					
Agricultural Research Service					
Forest Service	1,139,037	209,747		165,021	25,447
Department of Commerce					
Maritime Administration					
Department of Defense					
Air Force					27
Army					
Corps of Engineers		715			
Navy					
Federal Aviation Agency				165	
Federal Communications Commission					
General Services Administration					
Department of Health, Education and Welfare					
Public Health Service					
Department of the Interior					
Bonneville Power Administration		139	329		6
Fish and Wildlife Service					
Bureau of Indian Affairs		9			
Bureau of Land Management					
Coos Bay Wagon Road Land					
Oregon and California Railroad Revested Land			11,695		41,456
Controverted Oregon and California Land					
Special Act Oregon and California Land					
Public Domain	19,089	35,845	360	89,524	1,645
Total BLM	(19,089)	(35,845)	(12,055)	(89,524)	(43,101)
Bureau of Mines					
National Park Service					
Bureau of Reclamation		5,146		3,529	
Post Office Department		3/	3/		1
Treasury Department					
Coast Guard					
Veterans Administration					
Total federal land	1,158,126	251,601	12,385	258,239	68,581
Total land area	2,033,920	1,527,680	458,240	1,092,480	453,760
Percent in federal ownership	56.9%	16.5%	2.6%	23.6%	15.1%

1/ Partly estimated
2/ Includes 8,846 acres of "Unperfected Entries" which are not included in county figures
3/ Less than one-half acre
4/ Some totals do not add due to rounding
5/ Data are June, 1962, except for Forest Service and Bureau of Land Management which are for June 30, 1961.

Source: Carolan, William B., Jr., Federal Land in Oregon, Oregon State University (Corvallis, 1963).

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